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Technical Evaluation for Labelling Review Recommendation 14: Mandatory declaration of total and naturally occurring dietary fibre in the nutrition information panel

Executive summary

In 2009, the then Australian and New Zealand Ministerial Council for Food Regulation (now known as the COAG Legislative and Governance Forum on Food Regulation (Forum)) agreed to proceeding with a comprehensive independent review of food labelling law and policy. An expert panel, chaired by Dr Neal Blewett, AC, undertook the review and the panel's final report, *Labelling Logic: Review of Food Labelling Law and Policy (2011)* (Labelling Logic) was publicly released in January 2011.

Recommendation 14 from Labelling Logic stated **that declaration of total and naturally occurring fibre content be considered as a mandatory requirement in the Nutrition Information Panel (NIP)**. Currently, mandatory declaration of total dietary fibre in the NIP is not required (although voluntary declarations are permitted), unless nutrition content or health claims are made about dietary fibre, any specifically named fibre, sugars or any other types of carbohydrate. There are no requirements to declare the naturally occurring dietary fibre content of a food.

In 2011, the Forum provided a response to the *Labelling Logic* report which considered Recommendation 14 in association with two other recommendations (Recommendations 12 and 13) also relating to NIP declarations along with ingredient listing. The Forum asked FSANZ to undertake a technical evaluation and provide advice on these proposed changes to the ingredient listing and NIP. However, FSANZ has progressed its technical evaluation and advice on Recommendation 14 separately, because of the diverse nature of the specific issues involved in each of the three recommendations.

In relation to Recommendation 14, the Forum also noted that some industry stakeholders have concerns about the scientific basis and technical feasibility of distinguishing between naturally occurring fibre and other fibre on the food label.

In response to the Forum's request for technical evaluation and advice, FSANZ has:

- conducted a scientific and technical assessment considering the types of dietary fibre in food, analytical and alternative techniques for estimating levels of naturally occurring versus total dietary fibre, and the physiological effects of dietary fibre
- compared the current requirements and permissions in the Code for providing label information on the dietary fibre content of food to those of overseas food regulations

- undertaken preliminary consideration of the impact of mandating declaration of total dietary fibre in the NIP by:
 - completing a rapid evidence assessment of consumer knowledge, attitudes and behaviours relating to the declaration of dietary fibre in the NIP
 - estimating the direct labelling costs of mandating the declaration of total dietary fibre content in the NIP.

The **key findings** are as follows.

Distinguishing naturally occurring dietary fibre

- There is no simple means by which naturally occurring dietary fibre can be distinguished from total dietary fibre. Naturally occurring dietary fibre can often be found together with dietary fibres from refined sources in the same food (and can even consist of the same substance in the food).
- Available information also suggests that differences in physiological effects cannot be used as a way of distinguishing natural occurring and refined dietary fibres as both have the potential to contribute to the some of the recognised health outcomes for dietary fibre.
- There is no readily available method of analysis that clearly distinguishes naturally occurring dietary fibre from total dietary fibre where both natural and refined fibres are present. The use of non-analytical alternative approaches, such as calculating the naturally occurring dietary fibre of ingredients from food composition data, is currently not possible, as national food composition tables and nutrition labelling tools for Australia and New Zealand do not contain the information required for these purposes.
- Therefore, FSANZ considers that to separately declare naturally occurring dietary fibre from total dietary fibre in the NIP to be difficult and impractical to implement.

Declaration of total dietary fibre

- The current regulatory approach to the declaration of total dietary fibre content in Australia and New Zealand is consistent with Codex Alimentarius guidelines and European Union regulations. Other than the United States of America and Canada, FSANZ is not aware of any other overseas regulations that mandate the declaration of total dietary fibre content on all food labels.
- Preliminary consideration has shown that some consumers will value increased access to total dietary fibre information, but also that there could potentially be costs to industry. Due to data limitations, a more definitive analysis cannot be made, especially on the magnitude of the costs to industry. However, FSANZ has identified the following:
 - The rapid evidence assessment of consumer knowledge, attitudes and behaviour suggests that there is value to some consumers in the display of dietary fibre information in the NIP and that this information may influence dietary fibre intakes.
 - There is limited evidence on how consumers respond to dietary fibre declarations; however, the literature that is available suggests consumers are more likely to use this information when selecting products perceived to be higher in dietary fibre and less likely when selecting products that are viewed as lower in dietary fibre. Also, consumers have limited knowledge of what is a nutritionally high or low level of dietary fibre.

- It is likely that inclusion of a declaration of total dietary fibre in the NIP would be a minor labelling change (for those foods that are not already declaring this information) with an estimated direct labelling cost of around AU\$4,000 per single SKU¹. This cost does not take into consideration indirect costs (e.g. write-off of stock in hand, reformulation, product testing, marketing costs or administrative costs).
- Available information suggests there are around 28,000 packaged food SKUs on supermarket shelves. While noting that the actual number of SKUs affected will be less because some SKUs already declare total dietary fibre in the NIP voluntarily or are exempt from requiring a NIP, the SKU figure does provide a general indication of the magnitude of the costs that might be incurred if the declaration of total dietary fibre was a mandatory requirement in the NIP. Further work would be required, including a robust cost benefit analysis, to fully consider the costs and expected benefits of mandating the declaration of total dietary fibre in the NIP.

¹ Stock Keeping Unit (SKU) – refers to a stock-keeping unit, a unique identifier for each distinct product and service that can be purchased in business.

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Supporting documents

The following documents were used to prepare this technical evaluation report:

- SD1 Practicality and feasibility of differentiating natural from total dietary fibre
- SD2 Rapid evidence assessment on consumer knowledge, attitudes and behaviours relating to dietary fibre

1. Introduction

1.1 Background to Recommendation 14

In 2009, the then Australian and New Zealand Ministerial Council for Food Regulation (now known as the COAG Legislative and Governance Forum on Food Regulation (the Forum)) agreed to a comprehensive independent review of food labelling law and policy. An expert panel, chaired by Dr Neal Blewett, AC, undertook the review and the panel's final report, *Labelling Logic: Review of Food Labelling Law and Policy (2011)* (Labelling Logic), was publicly released on 28 January 2011.

Recommendation 14 from Labelling Logic states **that declaration of total and naturally occurring fibre content be considered as a mandatory requirement in the Nutrition Information Panel (NIP).**

In making this recommendation, the labelling review panel considered that requirements for information should reflect national nutrition policy guidance. Labelling Logic states that *the Dietary Guidelines for Australian Adults identifies the importance of fibre, particularly as part of whole cereals, fruits or vegetables, in relation to reduced risk of cardiovascular disease and improved gut health. Thus requiring a declaration of naturally occurring fibre in the NIP is consistent with this dietary guideline. Specifying dietary fibre as naturally occurring is important, as this will act to encourage consumption of wholegrain cereals, fruits and vegetables, more accurately reflecting the intent of the dietary guidelines and maximising the beneficial effects of the diet more broadly.*

1.2 Government response to Recommendation 14

The government response to Labelling Logic considered Recommendation 14 in association with two other recommendations (Recommendations 12² and 13³). For the three recommendations, the Forum noted that the proposed changes to labelling requirements are very technical in nature and, as such, require further work to fully investigate and characterise the issues involved. The Forum also specifically noted that some industry stakeholders have concerns about the scientific basis and technical feasibility of distinguishing between naturally occurring fibre and other fibre on the food label.

The Forum therefore asked FSANZ to undertake a technical evaluation and provide advice on the proposed changes to the ingredient listing and NIP. The Forum indicated that the advice from FSANZ will assist in fully considering the expected benefits and cumulative impacts of possible changes before determining if amendments to the *Australia New Zealand Food Standards Code* (the Code) are required. However, given the diverse nature of the specific issues involved in each of these three recommendations, FSANZ has progressed the work on these recommendations separately.

² Recommendation 12: That where sugars, fats or vegetable oils are added as separate ingredients in a food, the terms 'added sugars' and 'added fats' and/or 'added vegetable oils' be used in the ingredient list as the generic term, followed by a bracketed list (e.g., added sugars (fructose, glucose syrup, honey), added fats (palm oil, milk fat) or added vegetable oils (sunflower oil, palm oil).

³ Recommendation 13: That mandatory declaration of all trans fatty acids above an agreed threshold be introduced in the Nutrition Information Panel if manufactured trans fatty acids have not been phased out of the food supply by January 2013.

1.3 Australian and New Zealand food labelling requirements for declaring dietary fibre

Standard 1.2.8 – Nutrition Information Requirements of the Code defines dietary fibre as *that fraction of the edible part of plants or their extracts, or synthetic analogues that –*

- (a) *are resistant to the digestion and absorption in the small intestine, usually with complete or partial fermentation in the large intestine; and*
- (b) *promote one or more of the following beneficial physiological effects –*
 - (i) *laxation;*
 - (ii) *reduction in blood cholesterol;*
 - (iii) *modulation of blood glucose;*

and includes polysaccharides, oligosaccharides (degree of polymerisation > 2) and lignins.

Standard 1.2.8 also sets out the nutrition information requirements, including the requirement for an NIP in a prescribed format (except where exempt), on food labels. Currently, the average energy content and average quantity of protein, total fat, saturated fat, carbohydrate, sugars and sodium in a food (per 100 g or ml and per serving) must be declared in the NIP

The declaration of total dietary fibre in the NIP is not mandatory, unless claims are made about dietary fibre, any specifically named fibre, sugars or any other types of carbohydrate. If dietary fibre content values are declared in the NIP, then they must be determined in accordance with the methods of analysis for dietary fibre that are listed in Standard 1.2.8.

Standard 1.2.7 – Nutrition, Health and Related Claims sets out the conditions for making nutrition content claims, including claims about dietary fibre. In addition, subclause 25(2) of Standard 1.2.7 requires the declaration of dietary fibre content in the NIP where a food relies upon dietary fibre to meet the Nutrient Profiling Scoring Criterion (NSPC). To be eligible to make a health claim and certain nutrition content claims, a food must meet the NPSC.

Including a declaration in the NIP which is not mandatory is considered a nutrition content claim. However, Clause 19 of Standard 1.2.8 provides permission for dietary fibre to be declared voluntarily in the NIP, without the requirement to meet the nutrition content claim qualifying criteria as set out in Standard 1.2.7. This means that dietary fibre can be voluntarily declared when the dietary fibre content of a food is less than the qualifying criteria of 2 g/serving for a *source* claim. The implementation of Standard 1.2.7 is currently in a three year transition period until January 2016.

2. Objectives and approach

As the government response to Recommendation 14 specifically focussed on naturally occurring dietary fibre, the **primary** objective of this project was:

1. To determine whether it is practical and feasible to differentiate the naturally occurring dietary fibre content of a food separate to its total dietary fibre content.

Recommendation 14 also makes reference to the declaration of total dietary fibre, therefore a **secondary** objective was:

2. To consider issues associated with mandating the declaration of total dietary fibre content in the NIP.

In addressing these objectives, FSANZ has:

- conducted a scientific and technical assessment considering the types of dietary fibre in food, analytical and alternative techniques for estimating levels of naturally occurring versus total dietary fibre, and the physiological effects of different types of dietary fibre.
- compared the current requirements and permissions in the Code for providing label information on the dietary fibre content of food to those of overseas food regulations
- undertaken preliminary consideration of the impact of mandating the declaration of total dietary fibre in the NIP by:
 - completing a rapid evidence assessment of consumer knowledge, attitudes and behaviours relating to the declaration of dietary fibre in the NIP
 - estimating the direct labelling costs of mandating the declaration of total dietary fibre content in the NIP.

3. Analysis of issues

3.1 Mandating the declaration of naturally occurring dietary fibre

3.1.1 Distinguishing naturally occurring dietary fibre

FSANZ has investigated the scientific and technical issues associated with the feasibility of distinguishing naturally occurring dietary fibre from total dietary fibre. The full details of this assessment are located in Supporting Document 1, with a summary of the key findings provided below.

‘Dietary fibre’ covers a group of chemically and structurally diverse substances that are largely, but not exclusively, carbohydrates. The types of dietary fibre that are found naturally in foods or are added through minimally processed ingredients, such as bran, overlap in composition with those that can be added from refined sources (such as concentrated wheat fibre). There is no clear separation chemically and functionally between those substances that are intrinsic to a food or contributed by ingredients that are not highly refined, purified and synthesised (natural dietary fibre) and refined dietary fibre⁴. In addition, foods can contain both natural and refined dietary fibres, and in some cases the natural dietary fibre may be the same substance as the refined dietary fibre.

A small, qualitative survey of foods carrying dietary fibre content claims, undertaken by FSANZ in 2013, shows that fibre can be sourced naturally from ingredients such as wholegrain cereals and wholemeal cereal flours, brans, nuts, seeds, dried fruit, vegetables, legumes, legume flours, resistant starch and BARLEYmax™. Refined fibres that appear to be most commonly added to foods are inulin/oligofructose, polydextrose, psyllium and soy fibre. Among the products identified that contained a refined dietary fibre and made label claims about dietary fibre content, almost all contained some natural dietary fibre as well.

In respect to measuring naturally occurring dietary fibre content, there are a range of the available dietary fibre analytical methods that overlap in the fibre types they capture. There are no readily available methods of analysis that clearly distinguish and quantify naturally occurring dietary fibre separately from total dietary fibre where both natural and refined fibres are present. Although methods of analysis have been developed for some dietary fibre types, including inulin, these methods are expensive, do not identify whether the substances are

⁴ Refined dietary fibre is defined as highly refined, purified or synthesised substances that meet appropriate specifications for identity and purity under Standard 1.3.4 or are otherwise in a refined and/or concentrated form.

naturally occurring or added, and are specific to particular compounds. There are no generally accepted equivalent tests for more complex refined fibre sources that contain a mixture of fibre types, such as soy fibre.

At present, the only feasible alternative to direct analysis, for estimating amounts of naturally occurring dietary fibre compared to total dietary fibre, is for manufacturers to estimate the refined fibre ingredient sources that have been added to their product and to subtract this value from the total dietary fibre content of their food. The United States Food and Drug Agency has recently proposed use of an ingredient-based approach as an alternative means of declaring values in the Nutrition Facts Panel (their equivalent of the NIP) when no official method of analysis is available for the calculation (USFDA, 2014). It is noted that as there are official methods for analysis of fibre, this approach would not be appropriate. However, for the purposes of discussion, if a manufacturer were to use an ingredient-based approach, they would need to know the level of dietary fibre in each refined ingredient to enable naturally occurring dietary fibre declarations in Australia or New Zealand. National food composition tables and nutrition labelling tools for Australia and New Zealand do not contain the information required to enable manufacturers to derive the information they would need for these purposes. These data sources would therefore need to undergo substantial modification and enhancement if a requirement to label natural fibre separately from total dietary fibre were to be mandated.

The key physiological effects of dietary fibre are identified in the definition of dietary fibre used in Standard 1.2.8 of the Code: laxation, reduction in blood cholesterol, and modulation of blood glucose (see Section 1.3 above). All types of dietary fibres (naturally occurring or otherwise) display at least one of these effects, and thus differences in physiological effects cannot be used as a way of distinguishing dietary fibre from either natural or refined sources. The assessment also found that there is little information available that would allow a definitive comparison of any health benefits of natural versus refined dietary fibre. The evidence reviewed suggests that both natural and refined dietary fibre have the potential to contribute to some of the recognised health outcomes for dietary fibre.

3.1.2 Naturally occurring dietary fibre in the context of dietary recommendations

Similar to the previous 2003 Australian dietary guidelines (NHMRC, 2003), the latest Australian Dietary Guidelines (NHMRC, 2013) emphasise the importance of eating a wide variety of foods including plenty of vegetables (including beans/legumes) and fruit, as well as grain (cereal) foods that are mostly wholegrain and/or high cereal fibre varieties. The guidelines specifically state that to maximise the impact on a range of health benefits, consumption of vegetables and fruit should be in their 'whole food' form. The New Zealand food and nutrition guidelines (Ministry of Health, 2003) provide similar guidance.

The labelling review panel's reference to the 2003 Australian dietary guidelines (refer to Section 1.1) suggests that naturally occurring dietary fibre content could be a helpful marker for indicating the wholegrain, fruit and vegetable content of a food. However, there are some limitations to this approach. For example, in the case of cereals, the measurement of dietary fibre (naturally occurring or otherwise) cannot be used as a surrogate for measuring the wholegrain content of a food because different grains contain different levels of dietary fibre. For example, uncooked rolled oats, brown rice and rye grain contain 10.6, 3.5 and 15.1 g/100 g total dietary fibre respectively, and yet each is 100% wholegrain (US Department of Agriculture 2013).

3.1.3 Feasibility of mandating declaration of naturally occurring dietary fibre

The premise of using the declaration of naturally occurring dietary fibre to encourage consumption of wholegrain cereals, fruits and vegetables relies on the ability to define naturally occurring dietary fibre, and is contingent on being able to readily distinguish dietary fibre from natural sources from other types of added dietary fibre ingredients in mixed foods. However, FSANZ's assessments show that there is no simple way naturally occurring dietary fibre can be separately distinguished and measured from total dietary fibre. The available information also suggests that naturally occurring dietary fibre has the same potential to contribute to recognised health outcomes for dietary fibre as dietary fibre from other sources.

Without clear ability to separate and measure naturally occurring dietary fibre, a requirement to declare naturally occurring dietary fibre in the NIP would be difficult and impractical to implement.

3.2 Mandating declaration of total dietary fibre

3.2.1 Comparison with international and overseas regulations

The regulatory approach for the declaration of total dietary fibre content in Australia and New Zealand is consistent with both Codex Alimentarius guidelines and European Union (EU) regulations, but differs to regulations in the United States of America (USA) and Canada.

The Codex *Guidelines for Nutrition Labelling* (CAC/GL 2-1985) support mandatory nutrition declarations for all pre-packaged foods (except where national circumstances do not support such declarations). The nutrients listed for mandatory declaration are energy, protein, available carbohydrate (i.e. dietary carbohydrate excluding dietary fibre), fat, saturated fat, sodium and total sugars, plus any other nutrient:

- for which a nutrition or health claim is made
- which is considered to be relevant for maintaining a good nutritional status, as required by national legislation or national dietary guidelines.

In Labelling Logic the review panel referred to the EU as *identifying dietary fibre as a key nutrient to be declared in the NIP*. However, in 2011 the EU released new regulations on the provision of food information to consumers (EU 1169/2011) that did not mandate the declaration of dietary fibre content in the NIP. Instead, these new regulations permit the voluntary declaration of dietary fibre content, but do not require the mandatory declaration unless a nutrition or health claim about dietary fibre is made. These requirements become fully effective in December 2014 for foods with an NIP, and for all foods from December 2016 (the NIP remains voluntary in the EU from December 2014 to December 2016).

In contrast, both the United States Code of Federal Regulations⁵ and the Canadian Food and Drug Regulations⁶ mandate the declaration of dietary fibre content on food labels. When a manufacturer declares a dietary fibre content, the value must be measured using a method of analysis established in the *Official Methods of Analysis of AOAC International*.

⁵ Code of Federal Regulations, Chapter 21 §101.9(c)(6)(i)

⁶ Canadian Food and Drug Regulations, B.01.401

These regulations require that the total dietary fibre content be listed as a subcomponent of total carbohydrate content. However, this requirement does not apply in the USA if the dietary fibre content is less than 1 g/serve; in this instance, a food label can declare 'less than one gram'. In both Canada and the USA, if the content is less than 0.5 g/serve, then the value can be expressed as zero. Alternatively, the statement 'not a significant source of dietary fibre' can be used in place of a numerical declaration if the dietary fibre content is less than 0.5 g/serve and six or more of the food's energy and nutrients also have a value of zero.

Besides USA and Canada, FSANZ is not aware of any other overseas regulation that mandates the declaration of dietary fibre content in the NIP. FSANZ has also been unable to identify any overseas food regulations that require the separate declaration of naturally occurring dietary fibre.

3.2.2 Consumer knowledge, attitudes and behaviours relating to dietary fibre declarations

FSANZ has conducted a rapid evidence assessment⁷ to consider whether mandating total dietary fibre content in the NIP would provide meaningful information to consumers, and whether this information would influence food purchasing behaviour. The rapid evidence assessment can be found in Supporting Document 2. In undertaking this assessment, FSANZ has noted that there is relatively little literature available on consumer use and understanding of dietary fibre information in the NIP (or the overseas equivalent of an NIP).

In general, Australian and New Zealand consumers understand that dietary fibre is important and that their intake should be increased, although this knowledge is uneven across socio-demographic groups. In an on-line survey carried out in 2007 (Stafford et al. 2008), it was found that 20 percent of Australians and 17 percent of New Zealanders reported they used dietary fibre information in the NIP when making first time purchases. By comparison, some overseas studies have reported higher levels of use of dietary fibre information. However both the Australian and New Zealand estimates. These studies utilise self-reported data, and may be overestimates of the use of this information. Section 3 of Supporting Document 2 provides further details on studies that have investigated the use of dietary fibre information by consumers.

While often cited as one of the nutrients used when purposely selecting healthier food choices, dietary fibre content information is more likely to be used when the product is already perceived to be a source of dietary fibre, or when selecting a product for the first time. Consumers may not seek to use dietary fibre information where they do not perceive the food as being a source of dietary fibre.

The literature suggests that consumers are more adept at selecting the healthier choice when comparing dietary fibre in two products, than when assessing dietary fibre levels in a single product. The former requires the ability to determine which level of fibre is higher of the two, while the latter requires knowledge of the absolute levels of fibre that is deemed nutritionally important, and which foods are higher or lower in dietary fibre.

⁷ A rapid evidence assessment (REA) is a systematic and rigorous approach to reviewing the evidence concerning a specific research question. The 'rapid' adjective of the REA is in constraining the focus of the assessment so that search, retrieval, filtering, review and critique of literature takes place within a narrow and well-defined scope (Government Social Research Service 2014). In this case the major limit was on use of fibre information in the NIP rather than all references to fibre information use by consumers.

The format of dietary fibre information on a label is also important. There is some evidence that consumers may not understand the different units used to express dietary fibre and make inferences on the absolute value without reference to the units of the expression. Thus the same quantity of fibre in a food may be interpreted differently when expressed as g/100g than when expressed as %DI⁸.

There were limited studies that explored the impact of dietary fibre information in the NIP on consumption or purchase behaviour. In one study, where consumers could accurately differentiate between high and low fibre options, this did not translate into increased purchase intent for the healthier option. However, the evidence still shows that reading the NIP (or overseas equivalent) is correlated with higher dietary fibre intakes.

Overall, the limited literature suggests that there is some value to some consumers in the display of dietary fibre information in the NIP. Consumers use this information in making some food choices, and the information may influence dietary fibre intakes. Consumers generally understand that they should consume more dietary fibre, and to a lesser extent, they are aware of the nutritional and health benefits dietary fibre may provide.

However, the literature also suggests consumers are more likely to use this information when selecting products perceived to be higher in fibre and less likely to use the information when selecting products that are viewed as lower in dietary fibre. Knowledge of what constitutes a nutritionally high or low level of dietary fibre is limited.

3.2.3 Costs of mandating dietary fibre declarations

For the purposes of this evaluation, FSANZ has only considered the direct cost of changing food labels to include the total dietary fibre content in the NIP for all packaged foods. FSANZ has limited this assessment to direct costs as we expect that this would represent the majority of costs associated with the recommendation. If a regulatory change was to be pursued, then a more thorough assessment of all costs and benefits would be required in order to satisfy the OBPR RIS requirements. Such an assessment would also need to include indirect costs on industry, enforcement costs, and costs passed on by manufacturers to consumers, which would encompass extensive consultation with the food industry and surveying of the costs that would be incurred by all stakeholders.

3.2.3.1 General approach to estimating costs of a labelling change

To estimate the direct cost of a labelling change, FSANZ uses a model based on labelling cost data collected by PricewaterhouseCoopers (PwC) (PricewaterhouseCoopers, 2008). The objective of the PwC report was to provide FSANZ with a list of the costs incurred in labelling or relabelling food and beverages to enable FSANZ to estimate costs when developing cost-benefit analyses and to make an informed assessment of the applicability of labelling costs provided in submissions during industry consultation.

The model breaks down labelling costs into the following components: labelling design, labelling production, proofing, package redesign and labour. It categorises labelling changes into one of three categories (minor, medium and major). A minor change is a change to text and one printing plate only. A medium change is a change to text and/or label layout, change to three printing plates and proofing being required. A major change is a change to text and/or label layout, change to six printing plates, proofing being required and changes to packaging shape/size/design. The model also provides different specific costs depending on the material and packaging type being changed (flexible, fibre, plastic, metal and glass).

⁸ %DI refers to 'percentage of daily intake'. The Code lists daily intakes values for various nutrients, with a value of 30 g/day applied to dietary fibre.

Costs are also differentiated as labour and non-labour costs. Costs are provided as an average cost per SKU⁹ for each material and degree of change (see Table 2 below).

The model does not take into consideration indirect costs such as the write-off of stock in hand, reformulation, product testing, marketing costs or administrative costs. Factors that affect indirect costs are also not part of the model; for example, the costs to a manufacturer can be reduced if the length of a transition period for a labelling change encompasses the normal lifecycle of packaging changes.

The PwC costing data was collected in 2007, and has been indexed using the Producer Price Index (PPI) (Australian Bureau of Statistics, 2013). This is the most up-to-date data that FSANZ has on labelling costs. However we note that labelling technology may have changed since 2007, which may also have an impact on costs.

Table 2: Direct cost of labelling change in 2013 (AU\$)*.

Degree of change	Packaging Material Cost of Change per SKU					
	Flexible	Fibre	Plastic	Metal	Glass	Average per SKU
Minor	\$3,466	\$3,423	\$4,473	\$4,491	\$4,217	\$4,014
Medium	\$8,463	\$9,175	\$11,161	\$6,800	\$9,750	\$9,070
Major	\$21,062	\$20,302	\$27,002	\$17,600	\$17,462	\$20,686

* Based on 2007 labelling cost data collected by PwC, which has been indexed for 2013.

3.2.3.2 Potential labelling changes associated with declaration of total dietary fibre

Mandating the declaration of total dietary fibre in the NIP is considered a minor change in the PwC categories of labelling change, as it relates to a single one-line nutrient entry in the already existing NIP. It is assumed that major label redesigns would not be required to include an additional total dietary fibre nutrient line in the NIP. However, there could be some circumstances where the change to labelling represents a medium change in PwC and others where no labelling change is actually required.

The average cost of a minor labelling change per single SKU is AU\$4,014. This is based on the assumption that there are equal numbers of products that require labelling in each type of packaging, i.e. flexible, fibre, plastic, metal and glass packaging. Overall direct costs for the labelling change could be estimated if the total number of SKUs that require amendment are known. A number of products currently include dietary fibre declarations in the NIP either because of mandatory requirements relating to voluntary nutrition and health claims, or voluntary permissions and these would not require a change in labelling. Although difficult to predict, it is possible with the implementation of Standard 1.2.7 that there could be changes to the number of products declaring their dietary fibre content in the NIP.

⁹ Stock Keeping Unit (SKU) – refers to a stock-keeping unit, a unique identifier for each distinct product and service that can be purchased in business.

FSANZ does not have reliable data upon which to estimate total direct costs. However, available information suggests that a major Australian supermarket stocks around 28,000 SKUs of packaged foods (Woolworths Ltd, pers. com.)¹⁰. While some of these SKUs may already have fibre declarations in the NIP, common examples being breakfast cereals and breads, others will not. Additionally, some packaged foods may be exempt from requiring a NIP. However, the total SKU figure above provides some general indication of the magnitude of the costs that could be incurred if the declaration of total dietary fibre was a mandatory requirement in the NIP. Finally, indirect costs have not been assessed, though such costs (e.g. determining fibre levels) would be associated with mandating declaration of total dietary fibre in the NIP. A robust cost benefit analysis would be required to satisfy COAG RIS requirements should a regulatory change be considered.

4. Conclusion

The key findings from this technical evaluation of Recommendation 14 are as follows:

Distinguishing naturally occurring dietary fibre

- There is no simple way naturally occurring dietary fibre can be distinguished from total dietary fibre. Naturally occurring dietary fibre can often be found together with dietary fibres from refined sources in the same food (and can even consist of the same substance in the food).
- Available information also suggests that differences in physiological effects cannot be used as a way of distinguishing natural occurring and refined dietary fibres as both have the potential to contribute to the some of the recognised health outcomes for dietary fibre.
- There is no readily available method of analysis that clearly distinguishes naturally occurring dietary fibre from total dietary fibre where both natural and refined fibres are present. The use of non-analytical alternative approaches, such as calculating the naturally occurring dietary fibre of ingredients from food composition data, is currently not possible, as national food composition tables and nutrition labelling tools for Australia and New Zealand do not contain the information required for these purposes.
- Therefore, FSANZ considers separately declaring naturally occurring dietary fibre from total dietary fibre in the NIP would be difficult and impractical to implement.

Declaration of total dietary fibre

- The current regulatory approach to the declaration of total dietary fibre content in Australia and New Zealand is consistent with Codex Alimentarius guidelines and European Union regulations. Other than the United States of America and Canada, FSANZ is not aware of any other overseas regulations that mandate the declaration of total dietary fibre content on all food labels.
- Preliminary consideration has shown that some consumers will value increased access to total dietary fibre information, but also that there could potentially be costs to industry. Due to data limitations, a more definitive analysis cannot be made, especially on the magnitude of the costs to industry. However, FSANZ has identified the following:
 - The rapid evidence assessment of consumer knowledge, attitudes and behaviour suggests that there is value to some consumers in the display of dietary fibre information in the NIP and that this information may influence dietary fibre intakes.

¹⁰ Woolworths Ltd. (2014) *personal communication* 14 February 2014

- There is limited evidence on how consumers respond to dietary fibre declarations; however, the literature that is available suggests consumers are more likely to use this information when selecting products perceived to be higher in fibre and less likely when selecting products that are viewed as lower in dietary fibre. Also, consumers have limited knowledge of what is a nutritionally high or low level of dietary fibre.
- It is likely that inclusion of a declaration of total dietary fibre in the NIP would be a minor labelling change (for those foods that are not already declaring this information) with an estimated direct labelling cost of around AU\$4,000 per single SKU. This estimated cost does not take into consideration indirect costs (e.g. write-off of stock in hand, reformulation, product testing, marketing costs or administrative costs).
- Available information suggests there are around 28,000 packaged food SKUs on supermarket shelves. While noting that the actual number of SKUs affected will be less because some SKUs already declare total dietary fibre in the NIP voluntarily or are exempt from requiring a NIP, the SKU figure does provide a general indication of the magnitude of the costs that might be incurred if the declaration of total dietary fibre was a mandatory requirement in the NIP. Further work would be required, including a robust cost benefit analysis, to fully consider the costs and expected benefits of mandating the declaration of total dietary fibre in the NIP.

5. References

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