
OPINION

On information regarding the nutritional quality of foodstuffs

25 June 2015

In a letter dated 4 March 2015 the General Directorate for Health (*Direction Générale de la Santé - DGS*) formally requested that the High Council for Public Health (*Haut Conseil de la santé publique - HCSP*):

- 1) determine, by a public health analysis, the most relevant cut-offs of the British Food Standards Agency's (FSA) nutrient profiling system score so as to categorize foodstuffs into five classes. These cut-offs should direct the population towards more nutritionally balanced food choices,
- 2) provide a global assessment of the relevance of the different nutrient profiling systems (nutritional scores) used in the world, according to their feasibility and to their relative interest in terms of public health, and estimate, in the light of the data from the international literature, if the use of such nutrient profiling systems have not led to further inequalities in nutrition.

The HCSP considered

➤ The legislative context

Article 5 of the 2015 French Health Act, currently being examined by Parliament, provides to facilitate consumer information on foodstuffs by complementing mandatory nutritional declarations with an additional notice or nutrition label using graphics or symbols:

"as part of the Public Health Code, it establishes the principle of concise, simple, nutritional information that is accessible to all. The provision of such information will be voluntary for producers and distributors. The form that this information may take may be based on recommendations gathered according to an implementing decree. These recommendations should be based on a scientific analysis."

To do so, it is based on Article 35 of the European regulation EU 1169/2011 (INCO regulation) regarding consumer information on foodstuffs, which itself refers to paragraphs 1 to 5 of Article 30 of the same regulation including mandatory and optional nutritional declaration [1]. Article 35 provides, under various conditions, the possibility for Member States to recommend to food business operators to use, on a voluntary basis, one or more forms of expression or presentation using graphics or symbols in addition to the mandatory nutritional declaration. These forms of expression aim to facilitate the consumer's understanding of the important role that foodstuffs play in their diet. Member States can recommend to food business operators forms of expression that they deem best satisfy the requirements mentioned in the aforementioned Article 35.

➤ The National Nutrition and Health Programme (PNNS)

The framework for French national nutritional policy is defined by the National Nutrition and Health Programme (*Programme National Nutrition Santé - PNNS*) [2]. The implementation of the food labelling measure provided for by the French Health Act is consistent with the range of complementary actions taken by the PNNS within the domains of, inter alia, food education, communication, information, training, improving the quality of the food offer and the provision of physical activity.

The implementation of a concise nutritional information system should also be carried out in reference to the PNNS and in coherence with its recommendations. The aim is to provide consumers with the necessary information to easily identify the alternative products with a better nutritional quality and thus take the PNNS guidelines into account in their choices (for example "eat less fat, less sugar, less salt").

This process does not, therefore, aim to stigmatise a particular food category or foodstuff within a category, but to help the population make food choices in the light of all the information that is provided to them (information campaigns, guides, etc.). The other aim of this measure is to improve the nutritional quality of the foods available by encouraging changes to the formulation of existing products and the creation of new products.

➤ **Work carried out by the French National Agency for Food, Environmental and Occupational Health & Safety (ANSES)**

ANSES's (*Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail*) scientific and technical background report is the reference point for the calculation of nutritional quality scores and the optimisation of cut-offs [3]. The ANSES report established the feasibility of the implementation of a nutritional information system based on five nutritional quality classes according to the FSA score, with cut-offs established using a statistical approach. The optimisation of the ANSES cut-offs and the adaptation of food groups where necessary were carried out in reference to French national public health and nutrition policy with systematic reference to the PNNS recommendations.

Furthermore, the HCSP took into account the ongoing work at the ANSES on updating the PNNS guidelines. These guidelines are mainly, though not solely, based on the link between the consumption of certain foodstuffs and health. It appears that the consumption of certain nutrients/foodstuffs is linked to the decrease or increase of the risk of certain illnesses. These links were used to analyse food rating systems according to their nutritional composition, using "negative" criteria (nutrients/foodstuffs associated with an increased risk), compensated to a greater or lesser extent by "positive" criteria (nutrients/foodstuffs associated with a decreased risk). The PNNS aims to promote a balanced diet on an overall nutritional level, notably via consumption guidelines, whilst the concise nutritional information system clearly illustrates the composition of a given foodstuff. These two processes, therefore, closely complement each other.

The HCSP recalls that

➤ **The main aim of the implementation of a concise nutritional information system is to act upon health-determining factors.**

The work of the HCSP is carried out in reference to the health policy framework centred around action upon health-determining factors, including the key factor of improving food consumption. In fact, in France, less than half of adults and one in five children eat at least five fruits and vegetables per day; whilst these statistics have improved over the last ten years, the quantities of salt consumed are still too high (notably, a quarter of men consume more than 12g of salt per day); the proportion of saturated fat as a percentage of the total fat consumed is also too high (38% in adults and 39% in children) [4].

The implementation of a front-of-pocket concise nutritional information system, or "nutritional labelling" is part of this approach as it aims, on the one hand, to give consumers the means to access clear and understandable information on the nutritional composition of foodstuffs and thus reinforces their power to act, and, on the other hand, to support the efforts of food manufacturers to improve the nutritional quality of the food they produce [5].

➤ **The concise nutritional information system must not deepen social and geographical inequalities**

The deepening of social health inequalities in France is a key concern to take into account in every public health policy. The effects of nutritional labelling on social inequality regarding food habits should be seen in a wider context where multiple factors may come into play [6,7].

In the first instance, the distribution of health information generally "benefits" those already aware of health issues, which may lead to greater social inequality. In the case of concise nutritional information systems, the premise is that the increase in inequalities linked to the distribution of such a piece of health information could be limited in comparison to other approaches (nutritional value charts, information campaigns, etc.) as the information is presented in a simple, intuitive format which doesn't require memorisation (by using a colour code with strong connotations, for example). The proposed nutritional score thus represents an easy-to-read choice criterion, bearing in mind that price represents a separate

criterion.

Furthermore, in the light of social health inequalities, this measure cannot be designed without being completed by other actions as part of an overall policy based on proportional universalism. In terms of geographical equality, the voluntary nature of the nutritional labelling necessitates vigilance regarding the geographically homogeneous adoption of the system, notably by producers in France's overseas territories.

➤ **The concise nutritional information system must be an accessible supplement to nutritional value tables**

The concise nutritional information system represents a supplement to the back-of-product nutritional value tables which were made compulsory by the INCO regulation [1]. These tables are of limited value insofar as they are often difficult to read and understand, notably by consumers with lower educational levels as they require a high reading and understanding "effort" [8]. Furthermore, they do not allow the consumer to easily compare the nutritional quality of several products.

➤ **The concise nutritional information system must sufficiently differentiate between foodstuffs**

A nutritional information system on the front of packaging must:

1. Allow consumers to distinguish the nutritional quality of different foodstuffs whilst shopping
 - a. between food groups
 - b. within food groups
 - c. within the same category of product or for different brands of the same product

This approach is thus well placed within the more global food and nutritional education approach, going from acquisition of knowledge in this field to the consumption of the foodstuffs themselves, via informed choices at the point of purchase.

2. Reward producers for the improvement and creation of foodstuffs of better nutritional quality by an improvement of their products' rankings.

➤ **The method for calculating the score and the ranking of foodstuffs in the nutritional information system must be 100% transparent, reproducible and accessible to all**

The algorithm used to calculate the nutritional quality score and the methods for calculating the relevant cut-offs must be in a format which can be made public and which is accessible to all (notably via institutional websites) which would ensure the system's reproducibility. These conditions - transparency and accessibility - are essential for the public's understanding and confidence in the system, factors which assist its large-scale adoption.

➤ **The method used to calculate the nutritional score should be based on the mandatory nutritional declaration**

The system cannot be implemented if the method used to calculate the nutritional score takes into account elements which producers, manufacturers and distributors would have to obtain through additional measurements which are both complex and expensive. The calculation of the nutritional score should therefore be mainly based on data made mandatory by the INCO regulation, that is to say information from the mandatory nutritional declaration which includes, per 100g of foodstuff:

Energy value (Kcal/KJ)
Quantity of fat (g)
Quantity of saturated fat (g)
Quantity of carbohydrate (g)
Quantity of sugars (g)
Quantity of salt/sodium (g/mg)

Quantity of protein (g)

Other information can nevertheless be used to calculate the nutritional score providing that they can be obtained without requiring producers, manufacturers and distributors to undertake specific additional measurements for which the measurement methods are not standardised. These additions need to correspond to information of great importance in terms of public health which would make the information provided coherent with the PNNS guidelines. This is the case for fruit and vegetables, taken into account in the FSA score, which are ingredients in established recipes, and fibre content which is already very often mentioned in nutritional value tables even though such information is not mandatory.

It is useful to note at this point that the foodstuffs that do not fall under the INCO regulation would not be included in the nutritional information system.

➤ **The proposed system must be scientifically analysed**

As is recommended by the WHO [9], the implemented system must be proven to be able to rate foodstuffs found on the French market in coherence with the PNNS nutritional recommendations but must also be proven, on an individual level, to be statistically linked to:

- the food consumption, nutritional intake and nutritional status of individuals
- the reduction of the occurrence of health events in cohort studies

The system must also prove its relevance and efficacy in terms of acceptability, understanding, purchasing or consumption behaviour through interventional, observational or experimental (simulation) epidemiological studies [9]. In any event, the system's characteristics should respect the key criteria identified in the most recent scientific literature at the time this document was written.

The HSCP evaluated the relevance and feasibility of the different nutritional differentiation systems used in the world

Every approach which aims to change a population's food choices must take into account the multiplicity of the factors which affect these choices: environmental factors (price, institutional and advertising information, product placement, packaging, etc.) cognitive factors (buying according to taste, budget, health or dietary concerns, etc.) but also physiological factors (product attractiveness and desire to buy and consume, emotional relationship with the foodstuff, metabolic state at the moment of purchase, association between sensory characteristics and the expected learned effects). Purchasing behaviour, which results from this multi-factorial "equation", is an individual phenomenon whereby it is difficult to predict the result of changing just one of the influencing factors, such as labelling. However, some studies which are still rare, limited to only a few determining factors and of inconsistent methodological quality, allow us to judge the benefit of such labelling on consumers' ability to distinguish the nutritional quality of foodstuffs and to use this tool to adopt better purchasing and eating habits [8, 10].

Among the factors found in the literature, certain aspects of nutritional information systems lead to better consumer understanding and to changes in their behaviour such as the use of a single indicator of nutritional quality that is quick to read and easy to interpret, the use of symbols and the use of colours with strong connotations [8, 10-14]. The system's approval by a national or international health body increases its efficiency [8, 10-14].

There are advantages and disadvantages to every concise nutritional information system. In this section, the HCSP's work was to identify, on the one hand, the relevance of the systems as substantiated by the available studies and, on the other hand, their coherence with French national nutritional health policy. The HCSP's work is therefore not limited to an evaluation of the systems' intrinsic qualities but also provides an analysis of the feasibility of their implementation (Annex 1).

It is, in fact, important to remember that the aim of a concise nutritional information system is to guide a consumer's food choices at the moment of purchase. It must therefore allow the consumer to judge the nutritional quality of a foodstuff at the point of purchase and not necessarily at the point of consumption. Regarding this point, the HCSP emphasises that no single measure will be sufficient to improve food habits and the nutritional state of a whole population and recalls the importance of complementing such

an approach with complementary messages aimed at encouraging the population to choose foodstuffs with better nutritional quality, as this labelling system impacts above all the consumers who have health concerns at the moment of purchase.

The analysis of data collected on all the complementary nutritional information systems leads first of all to the exclusion of all systems whose nutritional score algorithms are not directly available (*Guiding Stars* [15], *NuVal* [16]), as these are not reproducible by all (notably by producers in the case of voluntary use of the systems), and risk being strongly rejected by the population.

The nutritional information systems which use considerable amounts of data in addition to the data included in the mandatory nutritional table (*SAIN*, *LIM* [17,18,19], *AQuelleFrequence*, *Health Star Rating System* [20], *My5* [21,22]) were also discarded despite their relevance. It is, in fact, impossible to base a system on information which would require manufacturers to make considerable effort in terms of complex and expensive measurements (notably of vitamins and minerals), let alone for measurements with no standardised method.

Binary concise nutritional information systems (*Choices* [23,24], *Green Keyhole* [25], *Heart Check Food Specification Program* [26]) were discarded as they lead to a dichotomous "good/bad" view which is incompatible with a satisfactory perception of the nutritional quantities of different foodstuffs. The French national nutritional health policy, carried out in the PNNS framework, is centred around informed choices in the face of a diverse offer and not on a list of "bad foods" to be banned and "good foods" which should ideally be the only foods consumed.

Nutritional information systems which give several nutritional quality indicators, one per nutrient, instead of a single, concise indicator are also too limited to be included (*Repères Nutritionnels Journaliers (RNJ)* [27], *Multiple Traffic Lights* [28]). Systems composed of different indicators for each nutrient require the consumer to be able to understand the nutritional terminology used and be capable of prioritising the information provided for each nutrient, notably when the classification of nutrients appears conflicted. Finally, regarding GDAs (guideline daily amounts), the provision of multiple sets of data makes the message excessively complex thus requiring significant cognitive effort to decipher [8, 10].

Furthermore, systems using on a same graphic presentation both a nutritional quality rating and a recommended frequency of consumption must be discarded as they lack sufficient scientific information. Such an approach completely changes the overall aims of such a system, aimed notably at comparing the nutritional quality of foodstuffs at the point of purchase, as it provides prescriptive messages on food consumption centred around only one foodstuff. The scientific foundations upon which recommended frequency systems can be based are only sufficiently solid for a limited number of food groups. Furthermore, they are based on food groups but not a specific foodstuff or a product from a specific brand. Systems based on ideas of recommended frequency can therefore encourage consumers to change from buying one food group to another (as is proposed, for example, by "food pyramids"), but do not help consumers to choose between different products of the same food group.

Finally, the literature review suggests, but is not conclusive about possible adverse effects of front-of-pack nutrition labelling [29] (Annex 1):

- reduced attention paid to the nutritional information on the back of the packaging (INCO information)
- understanding by the consumer that a "green" foodstuff can be consumed without moderation
- more favourable ranking for products whose sweetness is created by sweeteners
- possible interpretation in terms of production type (use of pesticides, additives or other manufacturing processes) but not in terms of fat, sugar, salt or fibre content.

Due to a current lack of proof, these limits do not, at this stage, call into question the implementation of such a system, especially given that most of these problems can be overcome by supplementary information.

➤ **The HCSP evaluated the interest and the relevance of the 5-Colour Nutrition Label**

On the basis of the currently available information, the analysis showed that the 5-Colour Nutrition Label (5-CNL) is the only system which fulfils the relevance and feasibility criteria for a concise nutritional information system. This 5-Colour Nutrition Label is the graphic transposition of a nutritional quality score for foodstuffs calculated using information from a products nutritional declaration (Food Standards Agency score - FSA score) in the form of a nutritional labelling system.

Based on the epidemiological studies carried out, it has three characteristics which nutritional labelling should have according to Roberto and Khandpur [13]:

- the ability to attract consumers attention,
- simplicity,
- presentation of numeric nutritional information in a more meaningful way.

Furthermore, the use of five categories makes it easier for a product to move into a higher nutritional quality category with changes in product formulation than with three- or four-category systems. A five-category system is therefore more effective in persuading producers and manufacturers to improve the nutritional quality of the products they offer so as to increase their relative attractiveness.

Finally, the 5-CNL score has also been subject to scientific studies documenting a variety of pertinent criteria: classification of foodstuffs [30, 31], food consumption and the associated individual nutritional intake, morbidity and prospective link with health events [32]. The 5-Colour Nutrition Label has also proved highly acceptable and capable of letting consumers rate foodstuffs according to their nutritional quality [33].

The 5-Colour Nutrition Label, like every concise nutritional information system, also has limits, raised during consultations with different stakeholders:

- The 5-Colour Nutrition Label has not been tested in real conditions. Today, there is nothing to prove that labelling will have an impact on consumer behaviours. The studies carried out on the 5-Colour Nutrition Label appear promising but more comprehensive analysis is needed. This limit is nevertheless shared by most nutritional information systems studied.
- The FSA score (and the 5-Colour Nutrition Label) has a strong correlation with a product's energy density without taking into account proportions, products that may be eaten together and time of consumption. The score is calculated on the basis of 100g of foodstuff and not on "real" portions.
- The system would only allow for very limited nutritional optimisation as the percentage of products which could move from one category to another after a recipe change is described by consulted stakeholders as being relatively limited. Some types of change to recipes could also have an impact on the cost and could lead to consumers rejecting a new recipe.
- Food is potentially anxiety-provoking for a proportion of the population and is often chosen on the basis of efficiency. In such a context, nutritional labelling should not confound the anxiety-provoking nature of food and the possible stigmatisation of certain consumer (for example, obese people) which may result. This potential limit is also applicable for every nutritional information system.

These limits could be documented either prospectively or through simulation studies. At this stage, taking into account the numerous advantages previously mentioned, the 5-Colour Nutrition Label best fulfils the listed relevance and feasibility criteria within the framework of the French national nutritional health policy currently in force.

The HCSP has carried out work on the optimisation of the FSA score cut-offs in reference to the nutritional health policy.

ANSES's scientific background report and the work carried out on the food data of the French food quality observatory OQALI (*Observatoire de la Qualité de l'Alimentation*), as part of ANSES's ongoing work, was conducted so as to be able to establish the most pertinent cut-offs, as well as to optimise the algorithm for specific cases, in coherence with the PNNS public health recommendations [3].

The criteria chosen for the optimisation process were as follows:

- the number of categories that the different product families fit into: the cut-offs classing as many product families as possible in at least three categories were selected
- distribution among categories for product families fitting into only two categories: the distribution of products within product families around the cut-off point were analysed so as to evaluate the amount of recipe change required for a product to change category

The methods for the optimisation of the cut-offs and the calculating algorithm are presented in their

entirety in Annex 2.

➤ Cut-offs - general case

On the basis of information provided by the ANSES report, the FSA score is highly feasible and allows the coherent rating of the vast majority of food groups against each other [3]. The analyses carried out on the basis of the OQALI and the CIQUAL, taken from the ANSES report, lead to a change in the statistical cut-offs and the creation of the following cut-offs:

Table 1: FSA score cut-offs for general cases

5-CNL category	FSA score cut-offs
A/Green	Min - -1
B/Yellow	0 - 2
C/Orange	3 - 10
D/Pink	11 - 18
E/Red	19 - Max

Table 2: Distribution of solid foodstuffs in the 5-CNL categories according to food group, as a percentage - optimised cut-offs

	Green Min ; -1	Yellow 0 ; 2	Orange 3 ; 10	Pink 11 ; 18	Red 19 ; Max	N
Pre-dinner snacks	0.8	4.1	22.0	33.8	39.3	364
Cereal Bars	0.0	0.0	24.8	59.3	15.9	145
Manufactured Biscuits and Cakes	0.0	0.1	3.6	38.8	57.6	1675
Broths and Soups	7.2	64.7	28.1	0.0	0.0	623
Breakfast Cereals	6.3	1.6	47.2	44.1	0.7	426
Delicatessen Meats/Cold Cuts	0.2	4.5	27.6	24.6	43.1	554
Chocolate and Chocolate Covered Products	0.3	6.7	1.0	15.3	76.8	787
Stewed Fruit	99.8	0.2	0.0	0.0	0.0	515
Jams	0.0	2.8	71.8	24.9	0.6	177
Tinned Fruit	38.0	57.0	5.0	0.0	0.0	100
Ice Creams and Sorbets	0.3	0.7	37.7	47.7	13.6	961
Soft and Crunchy Bread	16.2	14.5	40.9	26.7	1.7	408
Frozen Pizzas	4.3	34.3	45.7	15.7	0.0	140
Long-Life Frozen Meals	50.1	35.7	11.8	2.4	0.0	423
Desert Preparation Mixes	6.7	11.1	31.1	24.4	26.7	45
Dairy Products (Fresh or Other)	18.9	25.7	45.9	8.6	0.9	1529
Fresh Delicatessen Products	25.3	27.1	29.7	17.2	0.7	1195
Processed Potato-based Products	29.8	16.1	33.5	20.6	0.2	511
Warm Sauces	34.2	11.8	38.5	15.0	0.5	187
Seasoning Sauces	0.0	0.3	15.3	59.2	25.2	333

The titles of the food groups correspond to the sectors identified by OQALI. Sector descriptions are available on the OQALI website.

The optimisation process also obtained the largest possible distribution of products within the different categories. The following table presents the number of categories within which the different products are divided.

Generally speaking, changes to the cut-offs have led to a decrease in the number of foodstuffs in the

"Red" category and an increase in the spread of foodstuffs from within certain product families between different categories. In particular, the number of product families present in only one colour category has decreased.

Table 3: Number of categories into which the different product families are divided, by category of product, as a percentage

	Number of product families	One category	2 categories	3 categories	4 categories	5 categories
Crunchy Pre-Dinner Snacks	9	11.1	44.4	33.3	11.1	
Cereal Bars	5		40	60		
Manufactured Biscuits and Cakes	45	8.9	68.9	20	2.2	
Broths and Soups	16	0	62.5	37.5		
Breakfast Cereals	9	0	33.3	33.3	33.3	
Delicatessen Meats/Cold Cuts	20	20	55	20	5	
Chocolate and Chocolate Covered Products	17	58.8	29.4	11.8		
Stewed Fruit	6	83.3	16.7			
Jams	4	50		50		
Tinned Fruit	3		100			
Ice Creams and Sorbets	17	11.8	23.5	52.9	11.8	
Soft and Crunchy Bread	9		11.1	66.7	22.2	
Frozen Pizzas	5		0	80	20	
Ready Meals	14		64.3	35.7		
Desert Preparation Mixes	1		0	100		
Dairy Products (Fresh or Other)	18		44.4	38.9	16.7	
Fresh Delicatessen Products	33		3	39.4	54.5	3
Processed Potato-based Products	13		38.5	46.2	15.4	
Warm Sauces	4	25		50	25	
Seasoning Sauces	10	10	60	20	10	

➤ Specific Cases

ANSES underlines that, for certain food families, the alignment between the FSA score rating and the PNNS recommendations is suboptimal. This includes cheeses, beverages and added fats.

For these specific cases, both the final cut-offs and the calculation algorithm for the FSA score were adapted whilst modifying as few algorithm parameters as possible and maintaining the approach's universality. This limitation of the FSA score led to the creation of a calculation method adapted to certain food families.

Cheeses

The PNNS currently recommends that people consume three dairy products per day [34, 35]. Whilst cheeses are included in the definition of dairy products, the PNNS recommends that their fat content (to be restricted) and calcium content (to be encouraged) be taken into account. In the light of these recommendations, it was therefore essential to optimise the original algorithm which put all cheeses in E/Red, to better take into account their specific protein content.

Optimisation of the calculation of the FSA score and the cut-offs provides a pertinent distribution in reference to the PNNS recommendations. Following the adaptation of the score, it seems that cheeses generally fall into the "Pink" category and not the "Red" category and that certain types of cheeses are now distributed in three 5-CNL categories and instead of only two. This minimal adaptation of the calculation algorithm thus provides better alignment between the 5-Colour Nutrition Label and the PNNS nutritional recommendations for cheeses.

Table 4: Distribution of cheese families in the 5-CNL categories, as a percentage - optimised cut-offs

	Green Min - -1	Yellow 0 ; 2	Orange 3 ;10	Pink 11 ;18	Red 19 ; Max	N
Hard Ripened Cheese	-	-	14.3	71.4	14.3	7
Firm Ripened Cheese	-	-	-	88.9	11.1	18
Soft Ripened Cheese	-	-	2.8	91.7	5.6	36
Ripened Cheese with Parsley	-	-	-	16.7	83.3	6
Processed Cheese	-	-	40.0	60.0	-	5
Non-Ripened and Speciality Cheeses	-	-	33.3	66.7	-	15
Total	-	-	10.3	78.2	11.5	87

Added Fats

The PNNS encourages the preference of vegetable fats over animal fats (butter, cream) [34, 35]. The classification obtained with the original calculation of the FSA score which placed all added fats into the "Red" category does not, therefore, seem coherent in light of the nutritional recommendations. The optimisation of the FSA score algorithm, taking into account the specific composition of fats in saturated fatty acids and unsaturated fats is therefore essential to ensure the coherence between the 5-Colour Nutrition Label and the PNNS recommendations.

The optimisation of the FSA score calculation and the cut-offs provides a pertinent distribution depending on the origin of the fat content.

Table 5: Distribution of fats in the 5-CNL categories, - Use of adapted FSA score and optimised cut-offs -

	Orange 3 ; 10	Pink 11 ; 18	Red 19 ; Max	N
Other Animal Fats	0	5	1	6
Butter and Milk-based Fats	0	5	3	8
Vegetable Oils and Fats	4	10	1	15
Margarine and Composite Fats	4	8	0	12
Total	8	28	5	41

Alcohol-Free Soft Drinks

In the case of drinks, the ANSES report highlights that, on the one hand, it is impossible to distinguish five nutritional quality categories using the FSA score, and that, on the other hand, the classification of types of drinks amongst themselves is not entirely coherent with the PNNS recommendations. In fact, according to the PNNS, the only reference drink is water. The other drinks should, therefore, all be considered of inferior nutritional quality than water [34, 35]. The FSA score calculation algorithm was optimised so as to better take into account the specific sugar and energy content of drinks.

The analyses carried out based on the OQALI led to the determination of the following cut-offs:

Table 6: FSA score cut-offs selected for drinks

5-CNL category	FSA score limits
A/Green	Mineral Waters
B/Yellow	Min -1
C/Orange	2 - 5
D/Pink	6 - 9
E/Red	10 - Max

Optimisation of the calculation of the FSA score and the cut-offs giving a pertinent distribution in reference to the PNNS recommendations (Table 7).

Table 7: Distribution of drinks in the 5-CNL classes, as a percentage - optimised cut-offs

	Yellow <2	Orange 2 ;5	Pink 6 ;9	Red 10 and over	Total
Alcohol-Free Soft Drinks <=2.5g/100ml	35.52	63.93	0.55	0	183
Alcohol-Free Soft Drinks > 2.5g/100ml	0	2.65	25.59	71.76	340
Sports Drinks	0	7.14	78.57	14.29	14
Fruit Juices	2.46	72.26	17.23	8.05	447
Vegetable Juices	93.75	0	6.25	0	16
Nectars	0	3.13	11.46	85.42	96
Smoothies	2.7	43.24	54.05	0	37

After the changes made to the algorithm and the application of the new cut-offs, the "Yellow" category drinks generally speaking includes artificially sweetened beverages and low-sugar beverages such as vegetable juice. The "Orange" category drinks includes mainly fruit juices. Sugary drink and fruit nectars generally fall into the "Pink" and "Red" categories.

The allocated cut-off points provide a good distribution of products from within the same product family, as the vast majority of product families were spread between at least two colour categories, excluding energy drinks with high sugar content >2.5g/100ml which all fell into the "Red" colour category in accordance with the PNNS guidelines.

Possible adaptation if the "fruits, vegetables, pulses" category cannot be included in the calculation of the FSA score for European legal reasons.

If the "fruits, vegetables, pulses" category cannot be included in the score for European legal reasons, it may be possible to maintain the bonus for fruits and vegetables by taking it into account directly in the product category. The "fruit, vegetable and pulse" bonus is essential to maintain the coherent classification in the 5-CNL categories of the following groups:

- Fruits: raw, cooked, processed
- Vegetables: raw, cooked, processed (e.g. fried or puréed)
- Fruit and vegetable juices

If it is not possible to include the "fruits, vegetables, pulses" category in the calculation of the FSA score, it would be sufficient to propose a mandatory five-point bonus for these groups up to a maximum bonus of 10 points for drinks, fruit and vegetable juices (containing at least 80% fruit and vegetables) so as to ensure coherence with the previous system.

Based on the available data, the work carried out by the working groups, and the consultations held, the HCSP recommends that:

1. A concise nutritional information system using a five colour scale based on the FSA score be implemented.

The proposed system is based on a general calculation for all solid foodstuffs and a specific calculation for special cases such as cheeses, added fats and drinks. The defined category cut-off limits fulfil the objectives of a concise nutritional information system: the differentiation of the nutritional quality of foodstuffs between food groups but also within food groups and product families.

2. The final labelling format be created using a universal design approach so as to make it accessible to the whole population

The final format of the concise nutritional information system must bring users together in a co-construction approach, notably and most importantly, those who are distanced from health information and prevention. This concerted approach will allow the optimisation of the colour codes, the typography and the symbols to ensure that the message is taken on board by the largest number of people possible. Particular emphasis will be placed on the perception and comprehension of the colours, notably the red category, as red is considered as stigmatising by certain stakeholders, whilst the available scientific studies suggest that it would be an efficient aspect of the system. It is also necessary to closely study the perception of the middle category "Orange". Professionals in contact with the public should be stakeholders in the approach. The whole scale should appear on the packaging so as to allow an evaluation of a product's nutritional quality relative to the whole scale.

3. A strategy be developed providing support and information for healthcare, social and educational professionals and the public.

This approach should aim to explain the system's procedures as close as possible to end consumers, at a local level. The concise nutritional information system, centred around the choice of foodstuffs at the moment of purchase, is not a substitute for a wider approach including the use of general consumption frequency for PNNS recommended foodstuffs, portion sizes and use of foodstuffs (in particular regarding which foods are eaten together and how they are prepared). It is important that everyone is able to identify both the system's advantages and limits. It is important to create a proper strategy so as to be sure that people from different living environments and population groups are informed.

4. The use of the concise nutritional information system be taught to all pupils as part of the health education curriculum in schools from September 2015.

Learning about the use of the nutritional information system should be part of nutritional education curricula but also of health promotion initiatives bringing together local stakeholders and families. Specific projects should target the most vulnerable socially or environmentally vulnerable pupils as well as those suffering from a chronic illness or handicap...

5. A monitoring and evaluation system be implemented so as to measure the impact on consumers and businesses.

Particular attention will be paid to:

1. The procedures for dissemination and voluntary adoption of the system by businesses according to product family, foodstuff characteristics, brand type and manufacturer.
2. The system's real impact on consumers (acceptability, attention paid to the system, understanding, credibility, buying habits, consumption and nutritional intake, misuse), notably regarding the expected public health effects (reduction of risk factors and improvement of protection factors).
3. The system's impact by category of consumer (levels of awareness and understanding, purchasing power, and interest for diet or health, etc.) so as to closely monitor possible effects regarding social health inequalities.
4. The system's impact on innovations, recipe and price changes, taking into account the observed changes in price depending on products' nutritional quality [18, 36].
5. The problems encountered by businesses regarding the adoption and implementation of the system.

The Expert Committee for Health Prevention, Education and Promotion met on 25 June 2015. 14 out of 16 qualified members were present, following 1 declaration of conflict of interest, the text was approved by 13 voters, 0 abstentions, 0 votes against.

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Annexes

Annex 1 : Evaluation of the feasibility and the interest of labelling systems in the light of the scientific literature and the time of the submission of this document.

Annex 2: FSA nutritional score and application in a 5 colour 5-CNL logo

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