Chapter 6
The Evolution of Nutrition Information

Abstract The use of labelling helps to reduce information asymmetries between producers and customers. Indeed, it supports consumers in the process of detecting and evaluating qualitative product features, with particular regard to intrinsic or indirect features such as flavour, which cannot be assessed before purchasing or consumption. The utility of this information in product choices varies according to consumer mood at the time of purchasing, but it is also affected by subjective processes, habits and motivations. Moreover, it is also important to understand how consumers perceive and interpret the information indicated on labels. In the context of nutrition labelling, given its relevance to consumer diet composition, worldwide legislators have introduced specific formats on nutrition labelling with time, to support a correct understanding of nutrition information by consumers. Following the presentation on the evolution of nutrition labelling with EU regulations and other formats applied in the USA, as well as those used in other main countries, the chapter discusses both resolved issues and issues that still exist in the present system of nutrition labelling.

An Overview on Nutrition Labelling

Nutrition information systems help to reduce information asymmetries between producers and customers because they are the main source of nutrition information at the disposal of consumers. The several forms of information disclosed on a product range from nutrition labelling or facts label to daily reference values on the back of the food package, as well as health claims and disclaimers (Hieke and Wilczynski 2012) that appear on the front of the pack (Grunert et al. 2010). Nutrition information systems and related information may effectively support consumers in making healthier food choices (Baltas 2001), if correctly understood by consumers. Consumer comprehension of nutrition information indicated on food products is important because it makes consumers aware of food choices, given that such choices may affect diet composition and nutrition balance. However, it seems that the level of

A. Tarabella and B. Burchi, *Aware Food Choices: Bridging the Gap Between Consumer Knowledge About Nutritional Requirements and Nutritional Information*, SpringerBriefs in Food, Health, and Nutrition, DOI 10.1007/978-3-319-23856-2_6

consumer comprehension of nutrition information on products differs according to the format of presentation (Jones and Richardson 2007). To this regard, nutrition labelling—or the facts table—is the most complete system of nutrition information to consumers because it basically indicates the amount of energy delivered (calories) and nutrients, and may also contain some information about micronutrients. In this way, nutrition labelling should drive the consumer's food choices from the vast ranges of products on supermarket shelves because it also provides information about intrinsic quality, as well as foodstuff value in comparison to price, which is the value attributed by the producer. The consumer has to recognize the right product for their diet easily and understand the food value rapidly. To this purpose, worldwide legislators have adopted specific rules regarding nutrition labelling in order to both support and protect consumers in their choice of food, while ensuring free movement within the food market. Such rules have also been changed with time as a consequence of emerging consumer needs and new food features or properties introduced by producers. For instance, the first consequence of the changes on the side of both demand and offer was the introduction of compulsory nutrition labelling for most foodstuffs. In the United States of America (hereinafter the USA), between 1972 and 1994, nutrition labelling was mandatory only for enriched or fortified products, or for products that made some type of nutrition-related claim on the label, but producers could label their products as they wished. In 1994, the FDA implemented the Nutrition Labelling and Education Act of 1990 (NLEA) fully, which required mandatory nutrition labelling for most food products, in order to contain increasing obesity among the US population. Regarding Europe, the European Parliament and Council have been issuing laws concerning information provided on foodstuffs since 1979. As a matter of fact, all labels in the pre-packaged foodstuffs marketed at Community level must list ingredients as stated in Directive 2000/13/EC (European Parliament and Council 2000), amended in Directive 2007/68/EC (European Commission 2007) and by Regulation 415/2009/EC (European Commission 2009). Directive 90/496/EEC (European Council 1990) states that nutrition labelling is also compulsory "where a nutrition claim appears in labelling, in presentation or advertising[1]" as confirmed by Regulation 1924/2006/EC (European Parliament and Council 2006). It is noteworthy that Directives 2000/13/EC and 90/496/EEC have been merged into Regulation 1169/2011/EC (European Parliament and Council 2011), which states that nutrition declaration is mandatory, an extended version of nutrition labelling provided by Directive 90/496/EEC, for most foodstuffs. This latter Regulation has been applied since December 2014. Therefore, the process of mandatory nutrition labelling in Europe was very long—over 30 years—and the European legislators will implement provisions similar to those adopted in the USA with a delay of over 20 years. In addition to the issues related to compulsory nutrition labelling, the content of this label varies greatly from country to country, namely the nutrient list and presentation may change according to specific cultural perspectives, or local nutritive needs, which

[1]Art. 2, c. 2, Directive 90/496/EEC.

may depend on the geographic position of the country, for instance. No doubt, these differences may pose some issues concerning needs for both information and protection of the global consumer, and also, in terms of harmonization of food market rules in order to face worldwide competition, with fewer and fewer frontiers.

The Evolution of Nutrition Labelling in Europe

Nutrition labelling was ruled in Europe in 1990 for the first time, with Directive n. 496. This norm defined the scope and criteria of applying nutrition labelling, as well as specific cases in which such a label was mandatory. Moreover, Directive 90/496/EEC also contained rules regarding the content of nutrition labelling and ways of presentation. According to this Directive, nutrition labelling was optional for most food products, but mandatory for products with a nutrition claim, that is "any representation and any advertising message stating, suggesting or implying that a foodstuff has particular nutrition properties due to the energy (calorific value)".[2] In this case, the product had to declare the energy and nutrients list with the related amount.[3] Actually, Directive No. 496 did not establish specific rules regarding content, that is, the message delivered by nutrition claims, although it provided for the latter to comply with the general principle which prohibits misleading information (European Commission 2001). In particular, this Directive pointed out two ways of presenting nutrition information in nutrition labelling, as described in Table 6.1.

Nutrition labelling indicating group B is more complete, and is compulsory for products with nutrition claims on sugars, fatty acids, sodium and fibre.[4] According to Directive 90/496/EEC, nutrition information on groups A and B had to be shown in table scheme, similar to those reported in Table 6.1, in which the orders of information and name are compulsory: it means that similar terms and synonyms are not allowed. In addition to nutrition fundamentals of groups A and B, nutrition labelling could reveal information about the quantity of the following components: starch; polyols; monounsaturated fat; polyunsaturated fat; cholesterol; vitamins and mineral salts as shown in Fig. 6.1, if they were present in the product with a quantity equal to 15 %—at least—of the recommended daily allowance calculated on 100 g or 100 ml.[5] Mandatory points about the content of nutrition labelling were (1) indicating only numeric values[6]; (2) referring to 100 g or 100 ml of product (in addition, nutrition values per portion or per serving can also

[2]Art. 1, c. 4, point (b), Directive 90/496/EEC.

[3]Art. 6 Directive 90/496/ECC.

[4]Art. 4, c. 2, Directive 90/496/EEC.

[5]Art. 4, c. 3, Directive 90/496/EEC.

[6]Art. 6, c. 1, Directive 90/496/EEC.

Table 6.1 Standards for nutrition labelling, Dir. 90/496/EEC

Group A	Per 100 g/per 100 ml/per serving/per portion	Group B	Per 100 g/per 100 ml/per serving/per portion
Energy value	kcal and kJ	Energy value	kcal and kJ
Protein	g	Protein	g
Carbohydrate	g	Carbohydrate	g
Fat (cholesterol)	g (mg)	Fat (cholesterol)	g (mg)
		Saturates	g
		Fibre	g
		Sodium	g

Source Our elaboration of Directive 90/496/EEC

Vitamin A µg 800	Vitamin B12 µg 1
Vitamin D µg 5	Biotin mg 0,15
Vitamin E mg 10	Pantothenic acid mg 6
Vitamin C mg 60	Calcium mg 800
Thiamin mg 1,4	Phosphorus mg 800
Riboflavin mg 1,6	Iron mg 14
Niacin mg 18	Magnesium mg 300
Vitamin B6 mg2	Zinc mg 15
Folacin µg 200	Iodine µg 150

Fig. 6.1 Vitamins and minerals which may be declared and their recommended daily allowances (RDAs). *Source* Annex 1, Directive 90/496/EEC

be shown)[7]; indicating the energy in kcal or in kJ[8]; quantifying protein by multiplying the total nitrogen by the factor 6.25[9]; and showing the quantity of saturated fatty acids when the amount of polyunsaturated fat, monounsaturated fat, and/or cholesterol is reported.[10]

The accuracy of the declared amounts, which are average values, must be confirmed by analysis, to be carried out by the manufacturer on the food, or on each ingredient, or by generally accepted official data.[11] However, starting from the second half of the 90s, the European legislator made a thorough review on the

[7]Art. 6, c. 2, Directive 90/496/EEC.

[8]According to conversion factors reported in the art. 5, c. 1, Directive 90/496/EEC.

[9]Art. 1, c. 4c, Directive 90/496/EEC.

[10]Art. 4, c. 4 s paragraph, Directive 90/496/EEC.

[11]Art. 6, c. 8, Directive 90/496/EEC.

Table 6.2 Consumer opinions and observations from food companies on nutrition labelling according to Directive 90/496/EEC

Consumer difficulties, due to	Food company concerns, due to
Format of nutrition labelling	Prescriptive nature of the legislation
Lack of understanding of nutrition fundamentals	Effects of packaging design
Position of nutrition information on the labelling	Restricted scope of the company-level innovation
Font size of information shown on the nutrition labelling	Cost associated to any changes in labelling legislation

Source Authors' elaboration from the European Commission (2008)

nutrition labelling legislation in order to give consumers clear nutrition information based on evidence and concrete elements, and able to respond effectively to growing consumer attention on the relationship between diet and health. In 1994, the EU Council laid down detailed norms for nutrition labelling of spreadable fat with Regulation 2991/94/EC (European Council 1994). However, the needs to simplify the framework on the one hand, and strengthen the efficacy of nutrition information made on food on the other, has led the EU legislator to merge the two most important labelling rules—Directive 2000/13/EC and Directive 90/496/EEC into a unique norm concerning food product information to consumers, namely Regulation (EU) 2011/1169. The legislative process of this rule was launched by a stakeholder consultation, brought about with a survey that was carried out between 2003 and 2007. This consultation involved a lot of people representing different categories of stakeholders. In addition, an open discussion on the Internet also took place between March and June 2006. The overall results highlighted that stakeholders were not satisfied with the regulation of nutrition labelling planned by the 1990 Directive and there were diverging opinions about how to improve it. Some of these observations are summarized in Table 6.2. In particular, it became necessary to investigate the position on nutrition labelling on pre-packaged products specifically, nutrition fundamentals to be necessarily included on the labelling, the simplification of nutrition labelling and the readability of the information. Therefore, the revision of the legislation on nutrition labelling's specific target was to fix the above-mentioned criticality, while considering the needs arising from production and distribution. For that purpose, the new regulatory system was planned with the aim of increasing nutrition information on food products, thanks to a wider use and clarity of content. This goal should be achieved with the harmonization of rules across the Member States in order to allow free competition among companies. The result is represented by a synergic fusion of the various regulations existing prior to the revision, so as to "increase clarity and consistency of Community rules" (European Commission 2008). The Regulation mentioned specifically takes care of the discipline on nutrition labelling in articles 29 to 35 included. These

articles present a substantial continuity with the modality of content presentation, that is, in table form,[12] however, extending the field of application to all food, except for food supplements, as in the previous Directive, regulated by Directive 2002/46/EC (European Parliament and Council 2002), and mineral water, regulated by Directive 2009/54/EC (European Parliament and Council 2009b), except the disposition of Directive 2009/39/EC (European Parliament and Council 2009a) related to the so-called diet foods, intended for a specific diet.[13]

Other new features include, first, the name itself of such labelling, which becomes nutritional declaration, and subsequently, its minimum mandatory contents, represented by (a) the energetic value; and (b) amount of fat, saturated fatty acids, carbohydrate, sugars, protein and salt. Close to the nutrition declaration, a statement may also be included where appropriate, indicating that the salt content is exclusively due to naturally contained sodium.[14] However, in case that the energetic value or the amount of nutrition fundamentals of a product is negligible, the information related to these elements can be replaced by a statement like "contains negligible amounts of …" positioned in close proximity to the nutrition declaration when present.[15] Moreover, in addition to the above-mentioned mandatory content, the amounts of one or more of the following fundamentals can be included: (a) monounsaturated fatty acids; (b) polyunsaturated fatty acids; (c) polyols; (d) starch; (e) fibre; and (f) minerals or vitamins, for which the indications in Article 4 of Directive 90/496/EEC remain substantially unchanged, excluding the case of beverages, for which the threshold is no longer 15 %, but 7.5 %. However, the list of minerals and vitamins has been extended, as shown in Fig. 6.2. Therefore, compared to that which is established in Directive 496 of 1990, it is no longer possible to indicate the cholesterol in food, and the sodium content has been replaced with the amount of salt.[16] It has to be highlighted that the nutrition declaration can reveal only the energy value, or the latter with the amount of fat, saturated fatty acids, sugar and salt, in the case of non-pre-packaged foods.[17] Moreover, in case of beverages with an alcoholic content higher than 1, 2 % (in volume) showing a nutrition declaration on the label, the declaration can only present the energy value.[18] The energy value and the amounts of nutrients must be expressed per 100 g or 100 ml and optionally, per portion and/or rations, as already provided by art. 6 of Directive 496/90, but the portion or serving must be clearly quantified on the packaging.[19] Both the

[12]Art. 34, par. 2, states that mandatory information defined according to art. 30, paragraphs 1 and 2, can be shown in line if the space on the product does not allow to include a table.

[13]Art. 29, Regulation (EU) 2011/1169.

[14]Art. 30, par. 1, Regulation (EU) 2011/1169.

[15]Art. 34, par. 5, Regulation (EU) 2011/1169.

[16]Art. 30, par. 2, Regulation (EU) 2011/1169.

[17]Art. 30, par. 5, Regulation (EU) 2011/1169.

[18]Art. 30, par. 4, Regulation (EU) 2011/1169.

[19]Art. 32, par. 2, Regulation (EU) 2011/1169.

Vitamin A (µg)	800	Chloride (mg)	800
Vitamin D (µg)	5	Calcium (mg)	800
Vitamin E (mg)	12	Phosphorus (mg)	700
Vitamin K (µg)	75	Magnesium (mg)	375
Vitamin C (mg)	80	Iron (mg)	14
Thiamin (mg)	1,1	Zinc (mg)	10
Riboflavin (mg)	1,4	Copper (mg)	1
Niacin (mg)	16	Manganese (mg)	2
Vitamin B6 (mg)	1,4	Fluoride (mg)	3,5
Folic acid (µg)	200	Selenium(µg)	55
Vitamin B12 (µg)	2,5	Chromium (µg)	40
Biotin (µg)	50	Molybdenum (µg)	50
Pantothenic acid (mg)	6	Iodine (µg)	150
Potassium (mg)	2 000		

Fig. 6.2 Vitamins and minerals which may be declared and their nutrient reference values (NRVs). *Source* Annex XIII of Reg. (EU) 2011/1169

Table 6.3 Comparison between Nutrition Labelling ruled by Dir. 90/496/EEC and Nutrition Declaration ruled by Reg. (EU) 2011/1169

	Dir. 90/496/EEC	Reg. (EU) 2011/1169
Food	Pre-packaged	Pre-packaged (and not packaged, on national basis)
Compliance	Voluntary	Mandatory
Nutrient fundamentals	Energy (kcal,-kJ), protein, carbohydrate, fat	Energy (kcal,-kJ), fat (saturated), carbohydrate (sugars), fibre, protein, salt/sodium
Voluntary additional nutrients fundamentals	Starch, polyols, mono-unsaturates, polyunsaturates, cholesterol, any of the minerals or vitamins listed in the Annex of Dir. 90/496/EEC	Starch, polyols, mono-unsaturates, polyunsaturates, fibre, any of the minerals or vitamins listed in the Annex of Reg. (EU) 2011/1169
Presentation	Per 100 g/ml or per serving size, with % RDA	Per 100 g/ml or per serving size, with % reference intake
Lay-out	No	Declaration shall be presented in the principal field of vision, and with a specific font size
Cholesterol	Admitted	Not admitted
Salt	Sodium	Salt
Reference intake	% RDA	Reference intake both for micro and macro nutrition fundamentals

Source Authors' elaboration from Dir. 90/496/EEC and Reg. (EU) 2011/1169

mandatory and additional information can be shown in % of the amount suggested by the Daily Guideline Amount (the so-called GDA), with the statement "reference intake for an average adult (8.400 kJ/2000 kcal)".[20] Table 6.3 indicates the main changes between Directive 90/496/EEC and Regulation (EU) 2011/1169.

[20]Art. 32, paragraphs 4 and 5, Regulation (EU) 2011/1169.

In December 2014, the provisions of the Regulation (EU) 2011/1169 came into force. However, the nutrition declaration will be mandatory starting from the end of 2016, as stated in Article 55 of the Directive. The European legislator seems to urge food companies in the immediate implementation of such labelling, according to art. 54, paragraph 3, which establishes that even before December 2014, foodstuffs bearing the information covered by articles 29 to 35 of the Regulation (EU) 2011/1169 could be launched on the market.

Comparison Between the EU Nutrition Declaration and the USA Facts Panel

In 2010, a FAO report prepared by Albert (2010) proposed an in depth review on the nutrition labelling format in several countries. Results of such a study reveal that in 2010, the regulation on nutrition labelling varied worldwide according to the categories illustrated in Table 6.4, which show evidence of the FAO report updated with the analysis published by EUFIC, in January 2015 (European Food Information Council 2015).

According to the elaboration illustrated in Fig. 6.3, there is a sort of homogeneous distribution across geographical areas with regard to the level of stringency regarding nutrition labelling. However, the European Union will be added to the group of countries with a mandatory nutrition labelling on mostly pre-packaged foods by the end of 2016. The fact that most countries "require nutrition labelling when a claim is made, is a reflection of the guidelines from the Codex Alimentarius Commission" because

Table 6.4 Authors' elaboration from Albert (2010, p. 41) and EUFIC (2015)

Regulation category (level of stringency)	Country
No regulation	Bahamas, Barbados, Bermuda, Belize, Dominican Republic, Haiti, Honduras, Bangladesh, Pakistan, Cambodia, Ghana, Jamaica
Guidelines on format and nutrient list for voluntarily applied nutrition labels	Bolivia
Voluntary unless a nutrition or health claim appears on the food or except on foods with special dietary uses	Switzerland, Costa Rica, Ecuador, Egypt, El Salvador, Guatemala, Brunei, Singapore, Vietnam, South Africa, Tunisia, Turkey, Morocco, Jordan, Venezuela, Lebanon, Kenya, Nigeria, Mauritius
Mandatory on all packaged foods	Australia, New Zealand, Canada, USA, Argentina, Brazil, Chile, Paraguay, Uruguay, Hong Kong, Israel, EU[a], Mexico, Colombia, India, Indonesia, China, South Korea, Malaysia, Taiwan, Russia, Japan, Saudi Arabia, Kuwait, Oman, Qatar, United Arab Emirates, Bahrain, Philippines, Thailand

[a]The nutrition labelling will be definitively mandatory for all pre-packaged foods by the end of 2016

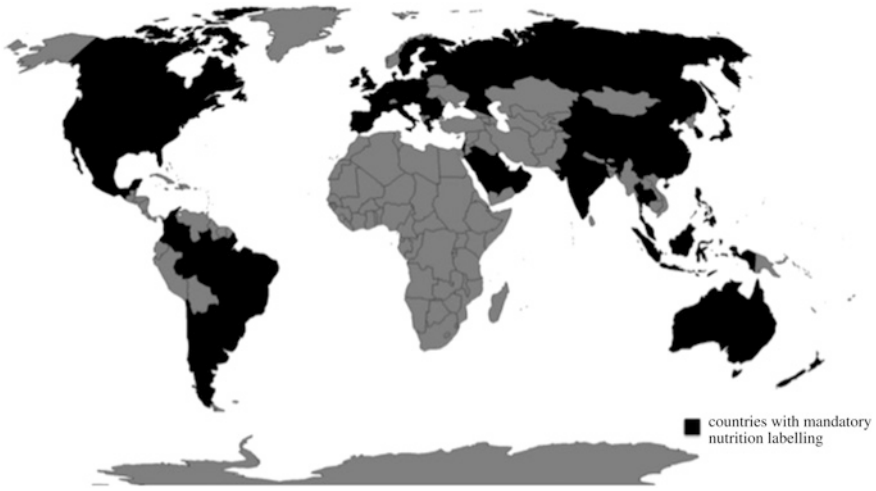

Fig. 6.3 Countries with mandatory nutrition labelling

the "Guidelines on Nutrition Labelling (CAC/GL 2_1985, revised 1993) state that nutrition labels should only be required when a nutrition claim is made" (Albert 2010, p. 40). With regard to the format, additional differences exist among countries worldwide. Although it is commonly accepted that the basic nutrition label is to include energy, plus protein, total fat and carbohydrate, some countries require the additional disclosure about fibre, saturated fat and sodium, or salt, or about particular groups of vitamins (Albert 2010). In particular, in relation to differences between the EU nutrition labelling according to Regulation (EU) 2011/1169 and the Nutrition Facts Panel in the USA, it has to be noted that the latter emphasizes the role of serving size, while providing consumers direct information about the proper amount of food to be consumed in order to satisfy real energy—and health—needs. To this purpose, the serving size and other features of the Nutrition Facts Label are currently being updated in order to better meet emerging consumer needs on nutrition information and face new issues related to nutrients of public health significance. The serving size is easily understood by consumers with respect to the numeric information that has to be interpreted. However, the interpretation of numeric nutrition data assumes that consumers have the necessary knowledge about nutrition fundamentals and are familiar with proper diet composition and correct energy intake. As mentioned in Introduction, a pilot consumer research conducted by the authors has revealed that consumers do not really know the correct daily intake of each nutrient. Therefore, the serving size should be measured according to real nutrition needs, and not real average consumption. In the second case, a serving size measured on the large portion, very frequent in many developed countries, may worsen eating habits. Reviewing the serving size by the FDA is important, because it registers changes in eating habits that have occurred in the last 20 years, namely from the introduction of the mandatory nutrition facts panel. In addition, the FDA has proposed to renew the nutrition

labelling design in order to make calories and serving sizes more prominent. In this way, the parts of the label that are important to current public health concerns are emphasized. Some concerns refer to the fact that the FDA would intend to increase—duplicating, or even triplicating—the serving size, according to actual average consumption in the US.[21] This is partially in disagreement with the last food-based dietary guidelines—the USA—issued in 2010 by the US Department of Health and Human Services (HHS) and the US Department of Agriculture (USDA), which have introduced a different way of showing the serving or daily plan, represented by a plate with large portions of fresh vegetables and fruits (HHS and USDA 2010), already shown in Chap. 3. The serving size in the EU nutrition labelling is optional, while the amount of cholesterol is not required (not even optionally), whereas in the US, the Nutrition Facts Label is mandatory. The US nutrition labelling also indicates the type of fat in detail—saturated and trans—and in addition to their total amount, the FDA has proposed to complete the information about sugar presenting the amount of added sugar, because it increases calorie intake and reduces the intake of nutrient-rich foods. The aim of these details is to highlight which products are highly processed. Finally, in the Nutrition Facts Label, each nutrition fundamental is indicated per Daily Value (DV) percentage, which is calculated on an average intake of 2,000 calories. This means that the Nutrition Facts Label mostly relates to the male average intake. The total amount is not fully reported because it is shown in comparison to a threshold.

In Europe, the nutrition declaration is mandatory for all pre-packaged food products (with exceptions listed in article 16, paragraph 4, article 44, paragraph 44 and appendix V), while fresh foods or foodstuff packed on point of sales do not apply the declaration, unless Member States adopt specific national rules. In the USA, nutrition labelling is not mandatory for fresh foods, and raw single-ingredient food—even if frozen—packaged by the retailer falls "under the voluntary nutrition labelling program. However, for the retail store to be in compliance with the voluntary program, nutrition labelling information must be available at the point of purchase (i.e., be displayed in close proximity to the product)" (FDA 2013). In conclusion, information on calories is increasingly being required in the last few years, also for restaurants (Albert 2010), which already have to display the Nutrition Facts Panel in an appropriate box, if they use claims to promote their foods. The main differences between the EU Nutrition Regulation and the US Nutrition Facts Label are summarized in Table 6.5.

[21] As shown on the web page of FDA: Proposed Changes to the Nutrition Facts Label. Available at http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm385663.htm#images, retrieved in April 2015.

Table 6.5 Comparison between Nutrition Declaration ruled by Reg. (EU) 2011/1169 and Nutrition Facts Panel ruled by NLEA 1990

	Reg. (EU) 2011/1169	NLEA 1990
Food	Pre-packaged (and not packaged, on national basis)	Pre-packaged retail, different from meat and poultry
Compliance	Mandatory	Mandatory. Restaurants using claims must display nutrition information in appropriate boxes
Nutrient fundamentals	Energy (kcal,-kJ), fat (saturated), carbohydrate (sugar), fibre, protein, salt/sodium	Energy (kcal,-kJ), fat (saturated and trans), cholesterol, sodium, carbohydrate, fibre, sugar, protein, Vitamin A, calcium, iron
Voluntary additional nutrients fundamentals	Starch, polyols, mono-unsaturates, polyunsaturates, fibre, any of the minerals or vitamins listed in the Annex of Reg. (EU) 2011/1169	Calories from saturated fats, mono-unsaturates, polyunsaturates, potassium; soluble fibre; alcohol; other carbohydrates; other vitamins and minerals for which they were established reference Daily Intakes, RDI; beta-carotene (as a percentage of vitamin A)
Presentation	Per 100 g/ml or per serving size, with % Reference intake	Per serving size
Lay-out	Declaration shall be presented in the principal field of vision, and with a specific font size	Table, nutrition fundamentals shall be presented in the principal field of vision, and with a specific font size
Cholesterol	Not admitted	Mandatory
Salt	Salt	Sodium
Reference intake	Reference intake both for micro and macro nutrition fundamentals	Reference daily values per protein and micronutrients, dietary reference values per macronutrients

Source Authors' elaboration from Reg. (EU) 2011/1169 and NLEA 1990

Conclusion

Rules on nutrition labelling largely differ worldwide, but last trends highlight that there is a sort of convergence towards a compulsory label. In particular, the (EU) 2011/1169 Regulation illustrates a comprehensive framework able to protect expectations of both consumers and food companies, although it is the result of a simplification of previous rules. Indeed, it is a unique regulation harmonizing the norms on label, nutrition labelling, presentation and promotion of food products, and on the presence of allergenic ingredients. Regulation (EU) 2011/1169 has maintained the general scope and guidelines of the previous norm on nutrition labelling, Directive 90/496/EEC, and has introduced significant novelties, which

try to meet stakeholder expectations. The first innovation, mostly targeted on consumer needs, is the introduction of the mandatory application for all prepacked food products, with only few exemptions. The mandatory nutrition declaration has been designed to be flexible, in order to allow companies to be in compliance with the norm by the end of 2016, and continue innovation in future so as to compete worldwide without decreasing on consumer protection. The comparison between the EU Nutrition Declaration and the US Nutrition Facts Label shows that additional improvements can be added to the European label, in order to increase direct understanding of nutrition information by consumers. In agreement with the US rules, the EU Nutrition Declaration could highlight the serving size, which is currently just an optional presentation (per 100 g/ml or per portion). Serving size can indeed help consumers when consuming, but it has to be properly measured on the bases of different consumer needs, first of all, that of getting correct information to help plan a healthy diet. The serving size used refers to average data on a portion, calculated in different ways from country to country. In the USA for instance, serving sizes are the reference amounts customarily consumed per eating session.[22] In order to properly support consumers in choosing food products in agreement with their real physiological needs, these reference amounts should also be calculated by taking into account the suggested dietary intake. However, the latter varies according to personal features and poses several issues in identifying the correct average data to use as reference.

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[22]Regulation 21 CFR 101.12 (b). Available at: http://www.ecfr.gov/cgi-bin/text-idx?SID=034fa7326cb07ed8d176f45427bbcc65&mc=true&node=se21.2.101_112&rgn=div8, retrieved in May 2015.

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