



Food and Agriculture
Organization of the
United Nations

**HANDBOOK ON
FOOD LABELLING TO
PROTECT CONSUMERS**

HANDBOOK ON FOOD LABELLING TO PROTECT CONSUMERS

Food and Agriculture Organization of the United Nations
Rome, 2016

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.

ISBN 978-92-5-109547-8

© FAO, 2016

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.

All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.

FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org.

CONTENTS

Acknowledgements	v
Preface	vii
1 BASIC CONCEPTS OF FOOD LABELLING	1
1.1 Why food labelling?	1
1.2 What is a food label?	2
1.3 What is a food labelling policy?	3
1.4 Stakeholders in food labelling	4
2 HARMONIZATION OF FOOD LABELS	5
2.1 Codex Alimentarius Commission	5
2.2 Regional and international agreements	6
2.3 World Trade Organization agreements	6
3 EFFECTIVE FOOD LABELLING: PRINCIPLES AND GOOD PRACTICES	9
3.1 Preventing misleading labelling	9
3.2 Promoting consumer understanding and use of labels	10
3.3 Format, language and legibility	11
4 FORMULATING A FOOD LABELLING POLICY	13
4.1 Costs and benefits of food labelling	14
5 REGULATIONS AND LAWS TO IMPLEMENT LABELLING POLICIES	17
5.1 Mandatory labels	17
5.2 Voluntary labelling	18
5.3 Support for the implementation and effectiveness of food labelling legislation	18
5.4 Compliance and enforcement mechanisms	19
6 COMPONENTS OF A FOOD LABEL	21
6.1 Food identity	21
6.2 Ingredient lists	21
6.3 Quantitative ingredient declaration (QUID)	21
6.4 Food additives	22
6.5 Labelling allergenic ingredients	23
6.6 Date marking	24
7 NUTRITION INFORMATION ON PACKAGES	27
7.1 Nutrient declaration (mandatory and voluntary)	27
<i>Mandatory nutrients</i>	27
7.2 Nutrient reference values	28
7.3 Nutrient claims	31
7.4 Front of Pack nutrition labelling	33
7.5 Health claims	35
Summary	39
Resources	41
References	45

TABLES

◆ TABLE 1 - The role of governments, food producers and consumers in food labelling.....	4
◆ TABLE 2 - Benefits and costs of labelling	15
◆ TABLE 3 - Key Nutrition Reference Values (NRV).....	29
◆ TABLE 4 - Types of nutrition claims.....	32
◆ TABLE 5 - Types of health claims	36

FIGURES

◆ FIGURE 1 - Example of a quantitative ingredient declaration (QUID).....	22
◆ FIGURE 2 - Nutrient declaration labels	30
◆ FIGURE 3 - Examples of Front of Pack labels from Norway, United Kingdom and Australia ..	34

ACKNOWLEDGEMENTS

FAO wishes to thank the following individuals for their contributions to this book: Janice Albert, Mary L'Abbe, Christina Wong, Carmen Bullon, Mary Kenny, Verna Carolissen, Markus Lipp, Maria Xipsiti and Chiara Deligia.

PREFACE

At the Second International Conference on Nutrition (ICN2), held in Rome 19-21 November 2014, governments affirmed that “empowerment of consumers is necessary through improved and evidence-based health and nutrition information and education to make informed choices regarding consumption of food products for healthy dietary practices” (FAO/WHO, 2014a). Food labelling was included among the recommendations in the ICN2 Framework for Action (FAO/WHO, 2014b).

Food labelling has been recognized as an effective tool to protect consumer health in terms of food safety and to promote nutritional well-being. Labelling laws prevent fraud and misleading information which protects consumers as well. Food labels have traditionally been used to convey information about the product identity and contents, as well as providing information about how to handle and prepare the food product safely. In recent decades, food labels have become vehicles to inform consumers about the relationships between specific food products and health.

FAO has produced this brief introduction to labelling as part of an ongoing effort to assist regulators and others working in the food system who are responsible for formulating and implementing food labelling policies. The book explains the reasons for food labelling and general principles and best practices that apply to all labels. Brief explanations about specific types of label information are provided, such as ingredient lists (including allergen and food additive information), date marking, nutrition labels (back of pack panels and front of pack systems) as well as nutrient and health claims. Legal and trade considerations are highlighted as well. Many sections of the book are based on the guidance given by the Codex Alimentarius Commission on food labelling in particular the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985).

This book provides a framework for understanding the reasons for food labels and practical advice for developing food labelling policies. Once the reader is aware of the technical, legal and economic aspects of developing specific label information, they will undoubtedly need additional information before formulating their policy. This book provides readers with sources of information about real world examples of the processes for implementing labelling policies.

FAO welcomes comments from readers on this book.

1 BASIC CONCEPTS OF FOOD LABELLING

1.1 WHY FOOD LABELLING?

When foods are packaged in bags, boxes, bottles, cans and wrappers, the consumer cannot detect the quality and quantity of the food through their senses of sight, smell, taste and touch. This means that the producer has information about the product that is not known to the consumer. Economists call this difference between sellers and buyers “information asymmetry”. Information asymmetry must be corrected to ensure that the market functions well because consumers need information about what the product is before they decide whether to purchase the product. By knowing the product identity, quantity and qualities, consumers decide if the price is satisfactory according to their needs and desires.

Marking food to inform consumers has existed since ancient times, mainly to indicate the identity, purity, quantity and freshness of the product. Labelling laws for food and drink can be traced back to the Middle Ages in Europe. In the early 20th century, governments in North America and Asia enacted laws to prevent adulteration and misbranding of foods in order to protect consumers from unscrupulous marketing of food products. Laws help to protect honest food sellers from unfair competition by sellers who mislead consumers to gain a competitive advantage in the market.

With the industrialization of agriculture and urbanization, producers sell packaged goods in large quantities to consumers in distant places. Personal contact between the food producer and buyer is becoming rare. With global trade, the distance between producers and sellers and risk of miscommunication are increased greatly. In the 21st century markets there are many foods that are unfamiliar to a large number of shoppers. These factors lead to a greater need to build trust in the integrity of the food products. Consumer confidence in the packaged product often begins with the information on the label.

The need to inform consumers about the true quantity and quality of the product and to prevent deceptive sales practices exists in all regions of the world. Preventing misleading information is a fundamental principle of labelling policies. There are incidences when food is deliberately placed on the market, for financial gain, with the intention of deceiving the consumer. This includes the sale of food which is unfit and potentially harmful. In addition, there are foods which do not provide the benefits that are claimed. Providing detailed information on the exact nature and characteristics of the foods sold enables authorities to take action if products are misbranded.

Changing food supplies and lifestyles can mean that consumers do not know which ingredients are found in the food product and how to use the product. Labels that inform consumers about contents they may need to avoid and illustrate the proper use of the product are important for protecting the health of the consumer. Food package information is an important way to inform consumers of potential risks of food products and to ensure that consumers understand how to store, cook and prepare the products safely. Increasingly, food labels inform consumers about benefits of consuming foods which are particularly nutritious and contribute to a healthy diet.

From a business perspective, a labelling policy can improve the marketing and competitiveness of products and stimulate innovation in the food sector. Labels enable consumers to compare products and react to the specific differences in products through their purchases. For example, some consumers may be willing to pay more for foods that enable them to obtain certain nutrients (for example, fortified food) and avoid or reduce ingredients that can present risks (for example, sodium). Some consumers may prefer or need to know the specific conditions under which the food products were produced (for example, production facility has traces of nuts) or may decide to avoid specific ingredients (for example, wheat) and this information can be provided on a label. The food industry responds to these demands for information about particular characteristics and may create new products that better meet consumer desires and expectations in response to labelling requirements.

1.2 WHAT IS A FOOD LABEL?

A food label is the information found on the food product seen by the consumer, the ordinary person. According to the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985), a food label is any tag, brand, mark, pictorial or other descriptive matter that is written, printed, stencilled, marked, embossed or impressed on, or attached to, a container of food or food product. This information can also accompany the food or be displayed near the food to promote its sale.

“Label” means any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to, a container of food.

“Labelling” includes any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal (FAO/WHO, 2007).

1.3 WHAT IS A FOOD LABELLING POLICY?

A food labelling policy should contribute to an environment that supports healthy diets by providing information to the consumer about the qualities of foods; drawing consumer attention to the potential benefits and risks of particular food products and motivating manufacturers to produce healthy and safe foods. The range of foods that carry label information is enormous including whole foods (for example, milk, oil and meat), simple processed foods (for example bread, noodles and tomato sauce) and highly -processed food products (for example ready-to-serve soups, biscuits, and crisps/chips).

While a food labelling policy is based on a set of laws and guidelines, there are other aspects of an effective policy that should be considered at the onset. The policy should include strategies to assist producers to understand and comply with the laws. Consumer education will be needed to make the best use of labels. Government officials will be required to enforce the policy, in line with legislation. The policy should define the various agencies and organizations that will be responsible for implementing the policy and provide the necessary resources for carrying out the policy.

In all countries, there should be minimum requirements for labelling of packaged foods to ensure that consumers have clear non-misleading information about the product identity, content, intended use and any appropriate food safety considerations. Mandatory, minimum requirements are important to protect the consumer and contribute to safe, nutritionally balanced diets. Regarding voluntary labelling, the government should provide guidance to prevent inappropriate labels. These topics are discussed in greater detail in later sections of this book.

Labelling information is mandatory when the information is necessary to protect the consumer's health and prevent fraud. In this book the main focus is on labelling that is mandatory in most countries and recommended in the Codex Alimentarius international food standards. When the product has characteristics that consumers desire but do not need, food manufacturers may choose to provide the information on a label voluntarily. Usually the voluntary information is provided because the producer believes the information will attract consumers. Although the provision of information is voluntary, the manufacturer needs to abide by rules to ensure that the information is not misleading.

Aspects of food trade need to be considered when formulating food labelling policy, whether a country is a food importer, food exporter or a combination of both. For exports it will be important to consider the requirements of the importing country because producers will need to comply with these requirements. For food imports, there may be certain provisions on food labelling to be requested of producers of imported foods. Meeting the standards of the international market is another reason to develop a food labelling policy.

1.4 STAKEHOLDERS IN FOOD LABELLING

Successful implementation of food labelling policies requires the support of governments, the food industry, scientists, consumer associations and others who have a strong interest in the policy and relevant knowledge and experiences. It is important to develop effective relationships and to promote dialogue and sharing of information about different interests and concerns. Active consultations of stakeholders are crucial during the development of food labelling policies and legislation. In addition to consulting with groups that have a particular interest in the labelling policy, there should be opportunities for the general public to give their views. Transparent procedures will give everyone more confidence in the legitimacy and credibility of government policy and decision making, thereby facilitating the success of government initiatives. In some countries, formal consultation is required by law. At the international level, it may be prudent to inform trading partners when new labelling policies are being developed.

TABLE 1 - THE ROLE OF GOVERNMENTS, FOOD PRODUCERS AND CONSUMERS IN FOOD LABELLING

NATIONAL GOVERNMENTS	FOOD INDUSTRY	CONSUMER
<p>To establish and enforce food labelling policies to support the sale of only safe and wholesome food</p> <p>To ensure that foods produced domestically and from foreign countries are labelled in a manner that is truthful, not misleading, informative, transparent and easily understood by consumers</p> <p>To provide adequate guidance for food manufactures to implement food labelling policies</p> <p>To obtain independent scientific advice</p>	<p>To comply with food regulations and guidelines</p> <p>To remain current with the legal requirements for food labelling in the country where the food is being sold</p> <p>To express business concerns in consultation processes</p> <p>To assist consumers in understanding the food label information</p>	<p>To use food label information to make informed food choices that fit their health and other needs</p> <p>To send signals to the market regarding what is desirable through purchase decisions</p> <p>To contribute valuable information on the design and implementation of food labelling by participation in consumer research and public consultation</p>

2 HARMONIZATION OF FOOD LABELS

When there are a wide variety of labels in a market consumers may be overwhelmed with information and become confused, which can prevent them from easily recognizing important necessary information and feeling confident about their food purchase. This is accentuated by global food trade where products originate in some countries and subsequently are traded to other countries. For food producers who sell their products in various markets (global, regional, national), complying with different labelling requirements adds to business costs and complexity. Harmonization of food labels is desirable from the perspective of business efficiency and consumer understanding. Further, harmonization is encouraged by and is in line with the requirements under the WTO Agreements as labelling requirements can create barriers to trade. Codex labelling texts provide useful guidance for such harmonization.

2.1 CODEX ALIMENTARIUS COMMISSION

The Codex Alimentarius Commission (“Codex”) was established by the World Health Organization and the Food and Agriculture Organization of the United Nations to develop international food standards to protect consumer health and to ensure fair practices in the food trade. The Codex General Standard for Labelling of Prepackaged Foods (CODEX STAN 1-1985) was among the first Codex standards to be adopted and together with some of the other general Codex texts (for example, on hygiene, contaminants, pesticide residues or food additives) forms an important pillar of the Codex food standards system. The General Standard was extensively revised and enlarged in 1985 and, since then, numerous amendments and additions have ensured that the Standard remains the key Codex instrument for delivering information about food to the consumer. When consulting Codex standards, it is essential to check the Codex website to ensure that the most up-to-date information is used. Additional Codex texts serve as extensions of the General Standard and assist in its interpretation. For example, all Codex commodity standards provide specific interpretation of the General Standard when it comes to the “Name of the Food” and two additional Codex standards cover the labelling of foods for special dietary use and labelling of food additives. Additional interpretation of the Standard is provided by guidelines covering a variety of claims that can be made on foods labels. These topics are discussed in later sections of this book.

The Codex subsidiary body responsible for the preparation of general labelling texts is the Codex Committee on Food Labelling (CCFL). The CCFL interacts with other Codex Committees and ensures that any food labelling or related texts developed by them are in accordance with the General Standard and another general labelling texts. Codex standards are used by countries as guidance for harmonization and have also been used as the basis for new food labelling policies.

2.2 REGIONAL AND INTERNATIONAL AGREEMENTS

As more food is traded, labelling must meet the various needs of consumers in different countries. National authorities should understand the ways in which trade agreements may affect national labelling policies and legislation.

Among trading partners, there have been important efforts toward regional harmonization in labelling. In Latin America, the common market known as MERCOSUR includes Argentina, Brazil, Paraguay, Uruguay, Bolivia and Chile. MERCOSUR developed a joint regulation on food labelling which is included in each country's national law. The countries belonging to the European Union have harmonized their labels through the adoption of Regulation 1169/2011 on the provision of food information to consumers (EU, 2011). Some African Regional Economic Communities have the legal mandate and capacity to enact legislation that is directly applicable in their member countries. There is bilateral cooperation between Australia and New Zealand on food labelling and the United States of America, Canada and Mexico have collaborated on labelling issues.

When there is regional harmonization, each country belonging to the regional community must ensure that their national legislation is fully consistent with the regional-level legislation. Harmonization of labelling regulations makes an important contribution to ensuring free movement of goods whilst protecting the interests of producers and enabling consumers to make informed choices. For those developing the policies, sharing information and expertise can facilitate the work although negotiations and recognizing other countries' diverse needs can be challenging.

2.3 WORLD TRADE ORGANIZATION AGREEMENTS

The World Trade Organization (WTO) was established in 1995 after the conclusion of the Uruguay Round of Multilateral Trade Negotiations in 1994 (GATT, 1994). Two agreements that were established at this time are relevant to food labelling to protect the consumer and promote human health: the Agreement on Technical Barriers to Trade (TBT) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS). In developing a labelling policy, both agreements should be consulted.

The SPS Agreement addresses aspects of food safety topics such as labels that provide health warnings, information on product use and food additive dosages. Labelling that

includes information on food additives, contaminants, pesticides, veterinary drug residues is covered under the SPS agreement. In addition, label information that describes food processing and certification of plant and animal health falls under the SPS agreement (WTO, 2010). Most other types of food labels fall under the TBT Agreement.

According to the TBT Agreement the Members desired:

...to ensure that technical regulations and standards, including packaging, marking and labelling requirements... do not create unnecessary obstacles to international trade...(The agreement recognized) that no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade (GATT, 1994).

According to the TBT agreement WTO Members are obliged to notify the WTO about all mandatory labelling requirements that are not based substantially on a relevant international standard and that may have a significant effect on the trade of other Members. That obligation is not dependent upon the kind of information which is provided on the label, whether it is in the nature of a technical specification or not (WTO, 2014).

While the SPS Agreement explicitly cites Codex standards as benchmarks for food safety and encourages harmonization with Codex standards, the TBT Agreement does not explicitly mandate international harmonization with Codex; however, the WTO uses Codex standards and guidelines as benchmarks to guide and judge national regulations. One step in compliance with the international trade agreements is to compare the national standards with the Codex standards.

There is some flexibility for setting different national standards. This flexibility allows for regulations to be tailored to the country's specific needs and allows countries to set standards that are higher or lower than others. When a label is not covered by Codex standards, the WTO provides guidelines on notification procedures so that trading partners have the opportunity to comment on the labelling policy (WTO, 2015).

The government authorities and businesses should keep informed about notifications from other countries and stay abreast of the changes in labelling policies of major trading partners to avoid rejections of exported products. At the end of this book, there is a list of websites for some countries that have mandatory labelling policies.

3 EFFECTIVE FOOD LABELLING: PRINCIPLES AND GOOD PRACTICES

Through experiences over many years and in numerous countries, a set of principles and good practices for food labelling have evolved. Often, the principles are embodied in laws and they must be followed. The good practices may be included in legislation or standards. Some practices are not officially recognized but they are common knowledge and values shared by experts throughout the world. Although there is a shared set of principles and good practices, individual governments may adopt different approaches to regulating food labelling because of different priorities, philosophies and capacities. The sections below describe the basic principles and good practices commonly followed throughout the world.

3.1 PREVENTING MISLEADING LABELLING

One of the main aims of a labelling policy is to prevent food sellers from deliberately misleading consumers through false representations on a package. Intentionally misleading consumers can lead to legal actions, for example, confiscation of products and fines. Such negative events can be costly and damage the reputation of the producer. Laws to prohibit misleading information are relevant regardless of whether the label information is provided mandatory or voluntary.

Sometimes a producer does not aim to mislead the consumer yet it becomes evident that shoppers do not accurately understand the information. Marketers must strive to ensure that labels are clear and that typical consumers will not misinterpret the information. Consumer studies should be carried out before a label policy is enacted to prevent unclear labelling. Psychologists and others have developed methods to learn how consumers understand and use labels. For example, consumer interviews, experiments and focus groups provide data on consumers' expectations and beliefs that may affect how consumers will interpret label information as well as consumers' reactions to specific examples of potentially misleading label information. These research methods can be used to evaluate options for reducing or eliminating misleading communications.

There are many ways that labels can mislead consumers. For example, omitting information is one way that a label can mislead consumers. A common example is a fruit juice product which has water and sugar in addition to pure juice in the product. The graphic image and name of the product on the label could lead the consumer to believe the product is 100% pure fruit juice when it is not. This can be prevented by requiring that the producer add information on the label clearly stating that water and sugar were added to the juice. Another example is ready-to-serve stew, which may contain a large amount of sodium/salt. When the label states, “no added salt,” this could lead the consumer to assume erroneously that the stew is low in sodium/salt or contains no sodium/salt. This could be prevented with a disclosure drawing attention to the fact that the stew contains a certain amount of sodium/salt.

Setting explicit definitions is another way to prevent misleading labels. Specific terms that can be used on foods can be defined in the labelling standard and criteria can be developed that a food product must meet before the package can bear certain terms. For example, Codex has established standardized definitions for the terms “free” and “low” as they relate to making claims about the level of energy, fat, cholesterol, sugars and sodium on any food product. Finally, prohibiting information that is inherently misleading may be needed.

3.2 PROMOTING CONSUMER UNDERSTANDING AND USE OF LABELS

Education, culture, language, advertising and personal experience are some factors that can influence how well consumers understand food labels. Various types of consumers may interpret identical labels differently; this is why each label must be designed with an understanding of the way that most consumers within a particular market will perceive a label. Experience has shown that consumers may be confused and distracted by complicated and excessive information. Therefore, labels should be designed to be as simple as possible, while not omitting important information. It is important to recognize that appropriate use of labels requires that awareness campaigns and education be provided to the public on an ongoing basis. Identifying the organizations that will be responsible for implementing this aspect of the work is part of developing the labelling policy.

3.3 FORMAT, LANGUAGE AND LEGIBILITY

The manner of presenting food label information is important to ensure that the label is useful, clear and not misleading. The following are general guiding principles for effective labelling to keep in mind (Joint FAO/WHO Food Standards Programme, 2010).

- ◆ A standard format to convey the same information is preferable to avoid confusion.
- ◆ Labels on packaged foods should not be separated from the container.
- ◆ Statements on the label must be clear, prominent, indelible and readily legible by the consumer.
- ◆ If the container is covered by a wrapper, the wrapper must carry the necessary information or the label must be easily read through the outer wrapper.
- ◆ The name and net contents of the food must appear in a prominent position and in the same field of vision.
- ◆ The language must be acceptable to the intended consumer.
- ◆ The same labels can have the same information in different languages.
- ◆ If the language on the original label is not acceptable, a supplementary label containing the mandatory information in the required language may be used instead of re-labelling.
- ◆ Authorities should establish the font type, style, and minimum font size as well as the use of upper and lower case letters to ensure legibility.
- ◆ A significant contrast should be maintained between the text and background so that the nutrition information is clearly legible.

4 FORMULATING A FOOD LABELLING POLICY

National labelling policies should be based primarily on the needs of consumers and producers in the country. Before embarking on a food labelling scheme, information should be gathered. Suggestions for relevant information are provided below:

- ◆ What kinds of packaged foods are commonly consumed?
- ◆ What are the sources of packaged foods – domestic, imported?
- ◆ Are packaged foods produced in the country intended for export markets?
- ◆ Which types of people are consuming packaged foods?
- ◆ Which packaged foods provide a substantial amount of the nutrients and energy in the population's diet?
- ◆ Are the public health problems in the country related to consumption of packaged foods?
- ◆ What is essential information to be transmitted, which should be mandatory on the label?
- ◆ What information can be added to the labels voluntarily by the producer?
- ◆ Are there methods of food production/use of technologies which need to be communicated to the consumer via the label according to national laws? For example, halal and irradiation.
- ◆ Would food labelling help consumers to choose foods that will lead to healthier diets in terms of meeting their nutritional needs and to avoid foods that may cause acute or chronic illnesses?
- ◆ Would labels help to prevent consumers from wasting money on products that are not worth the cost?
- ◆ What allergenic ingredients are commonly found in food products?
- ◆ What are the desires and concerns of food producers regarding food labels?
- ◆ What are the desires and concerns of consumer associations regarding food labels?

Following an assessment of the consumption of packaged foods, the public health needs within the country, and the concerns of the food industry and consumer associations, the government must determine which food products will be labelled and what information will be mandatory or voluntary on packaged food products.

In some countries, nearly all packaged products are labelled extensively. In other countries, the government has prioritized certain types of food for labelling. Some products may be exempt from certain labelling requirements. For example, if a serving is very small and not significant in the diet or producers operate at a small scale. The justification for including or exempting a type of product must be transparent and the policy should not aim to discriminate against a set of producers.

4.1 COSTS AND BENEFITS OF FOOD LABELLING

Each piece of information included on a food label has a cost and this cost must be compared with the benefit of providing the information on the product label. As an important step in the policy development process, the government authorities need to obtain the information to assess the costs and benefits of labelling to the extent possible. It is important to consider the costs and benefits over time, since the benefits such as behavior change and reductions in diseases can take years. Some costs, such as analyzing the composition of foods and creating new labels, may be high initially but decrease with time. The cost of ensuring compliance with the policy need to be considered.

Some governments have a formal cost benefit analysis process that uses information and techniques from economics and the other social sciences. These analyses look at the positive and negative effects of providing the label information for everyone involved, that is, the government, the food industry and the consumer. Carrying out a cost benefit analysis requires the cooperation of the food industry to obtain data and specific expertise of independent technical advisors. If a regulatory agency does not have this expertise among the staff, it may wish to contract a consulting firm or research organization to assist in conducting the analysis.

TABLE 2 - BENEFITS AND COSTS OF LABELLING

BUSINESSES	GOVERNMENTS	CONSUMERS
BENEFITS		
Ability to make legal claims about the qualities of the product	Enhanced credibility of regulations and public health policies	Become more educated about a product Gain ability to make comparisons of products Gain credible information about products
Ability to compete based on the qualities of the product that the consumer cannot detect without a label	Savings in the health system from reduced incidences of illnesses where health costs are borne by government	Learn to use product information to protect health Learn to use product information to tell if a product is worth the price
Compliance with regulations	Enhanced ability to facilitate trade with countries that have label requirements	Information that affects product choice can express consumer's values and priorities
Ability to trade in markets where such information is required		
Positive image of products		
COSTS		
Administrative	Research to develop label content and format Information and records	Higher prices for goods
Marketing	Information systems	
Changes in suppliers	Collection and administering data	
Label redesign	Inspection, enforcement and audit costs	

With a realistic idea of the country's labelling needs and assessment of the costs and benefits, policy options can be examined to decide what kind of labelling policy is best for the country.

5 REGULATIONS AND LAWS TO IMPLEMENT LABELLING POLICIES

Once the aims of the policy are determined, the basic food laws, consumer protection laws, commerce and trade policies, and any other relevant legislation of the country should be reviewed to determine the ways in which current laws could be revised or whether new legislation would be required to achieve the aims of the labelling policy. The institutions that will be responsible for enforcing the laws should be determined as well. Some countries have comprehensive laws that include many of the labelling topics discussed in this book. Other countries include specific labelling topics under different laws. In this case, the relevant laws should be compiled and made public to facilitate understanding of the legal basis of the policy. Most countries follow international standards such as Codex and their national legislation is consistent with these standards. Depending on the underlying policies and objectives, governments may adopt different approaches to regulating food labelling.

5.1 MANDATORY LABELS

When labelling rules are mandatory or binding, all food products identified in the rules must carry the same information unless they have been specifically exempted. Some countries have adopted detailed provisions on food labelling legislation. These provisions are normally incorporated into subsidiary legislation within the regulatory framework of general food control or general labelling legislation. Detailed labelling legislation applies to all national and foreign products, which supports harmonization and equal treatment for all food producers and sellers.

When implementing new mandatory or binding rules, the authorities often decide to introduce a transitional period to allow producers time to analyze their products, create new labels and eliminate stocks of unlabelled products. Often, the law is enacted and announced, followed by a period of several years before the policy is fully implemented. Governments and food industry associations may provide guidance and assistance to producers to help them meet the new requirements. For examples of guidelines for food producers, see the resource list at the end of this book. Throughout this book, we have indicated types of information that should be mandatory on labels, according to the Codex standards.

5.2 VOLUNTARY LABELLING

A product label may contain information which is appealing to the consumer but not necessarily required by the consumer. A labelling policy may authorize the use of voluntary labels explicitly or implicitly. Although the provision of information is voluntary, the manufacturer needs to abide by rules to ensure that the information is not misleading. Producers or other organizations may collaborate in developing voluntary standards for labelling to promote particular traits.

5.3 SUPPORT FOR THE IMPLEMENTATION AND EFFECTIVENESS OF FOOD LABELLING LEGISLATION

Governments' role in the delivery of information, education and advice to relevant stakeholders is critical to ensure proper implementation and compliance with food label policies and legislation. These activities include the provision of balanced factual information to consumers; the approval of labelling requirements and legislation; the provision of information packages and educational programmes for key officials and workers in the food industry; and the provision of training to responsible government agencies/authorities involved in enforcement.

In order to facilitate labelling implementation, consideration should be given to communications strategies that might include consumer education campaigns and outreach to or training for relevant stakeholders (industry, consumer associations, public health community, educators, and state and local authorities). Actions to promote use of food labels may be combined with other public health initiatives, for example, dietary guidelines and nutrition education.

Some of the technical requirements for food labelling may be addressed through the provision of appropriate support mechanisms. These could include:

- ◆ Nutrient calculation software or similar online tools;
- ◆ Food composition databases;
- ◆ Allowing alternate means of deriving nutrient values, for example, manufacturer's analysis or by calculation from database values of the ingredients used;
- ◆ Providing government and businesses access to the necessary infrastructure such as development of information technology infrastructure through government and industry partnerships.

5.4 COMPLIANCE AND ENFORCEMENT MECHANISMS

To ensure food labelling is effective and complies with national regulations, enforcement is necessary within the country and at the national borders where food enters or leaves the country. An enforcement policy which ensures compliance with food labelling requirements would require establishing or defining the following:

- ◆ Administrative structures within the national authority with clearly defined responsibilities on food control regulation and control, and accountability;
- ◆ Clearly communicated rules on mandatory requirements and any voluntary schemes or approaches (covering all foods irrespective of origin)
- ◆ A qualified, trained, efficient and reputable food inspection service for monitoring compliance through labelling audits;
- ◆ Enforcement approaches that include random monitoring, with the frequency and intensity of monitoring based on risks;
- ◆ Clearly defined consequences for not upholding food labelling requirements such as warnings, fines, detention or seizure of food and food recall.

Compliance and enforcement issues that may need consideration when establishing an enforcement policy include:

- ◆ The capacity and infrastructure of industry and regulatory authorities;
- ◆ Access to analytical testing and/or reliable, validated databases for determining nutrient content (availability and validity of methods);
- ◆ Variability in analytical methods and the use of different laboratories may lead to differing results;
- ◆ Permitted variability from declared value (accounting for inherent analytical variability, variations within good manufacturing practices, and ingredient or product variability);
- ◆ Costs to public and private sectors for compliance, monitoring and enforcement including follow up corrective actions.

6 COMPONENTS OF A FOOD LABEL

There are many components of a food label that aim to protect consumers from fraud and promote the health of consumers. Codex recommends that key types of information about the exact nature and characteristics of packaged foods be mandatory on labels. By outlining provisions requiring this information in food labelling, legislation can give authority to address fraudulent practices in food labelling.

The components discussed below indicate the minimum information which should be mandatory on a food package label. Revision of national legislation may be required to achieve this standard of labelling.

6.1 FOOD IDENTITY

Information on the identity of the food must be on the label to help consumers understand exactly what they are purchasing. This includes the food name, the amount of food, contact information for the food manufacturer, country of origin and lot number.

6.2 INGREDIENT LISTS

The ingredients list informs consumers of the substances that were used to make the food product. Except for single ingredient foods (for example, milk, salt), a list of ingredients with specific names is recommended to be mandatory on the food label.

If a food is dehydrated or condensed, the ingredients may be listed in order of proportion in the reconstituted product. A statement “ingredients of the product when prepared in accordance with the directions on the label” must be included.

When general class names can be more informative, they may be used in the ingredients list, for example ‘sugar’ can be used to describe all types of sucrose or ‘milk protein’ to describe milk products containing at least 50% protein.

6.3 QUANTITATIVE INGREDIENT DECLARATION (QUID)

In certain circumstances, it is necessary to state on the label, the quantity of an ingredient which corresponds to the quantity of the ingredient(s) in the finished product. The quantity must be declared in percentage terms and should appear in or next to the name of the food or be in the list of ingredients. This is known as quantitative ingredient declaration or QUID. QUID is designed to help consumers to compare the composition of similar products on ingredients that are likely to influence their choice.

Figure 1 - Example of a quantitative ingredient declaration (QUID)

INGREDIENTS:

Pasteurised Egg, Whole Milk, Wheat Flour, Cheese (13%), Onion (12%), Vegetable Oil and Hydrogenated Vegetable Oil, Modified Maize Starch, Salt, Dextrose.

It is recommended that QUID be used on the label in the following situations: 1) when the ingredient is included in the name of the food such as 'meat pastry' where the meat must be quantified; 2) when the ingredient is emphasized in words, pictures or graphics such as 'with cheese' ; and 3) when the ingredient is not included in the name of the food or emphasized on the label but is essential to characterize the food and is expected to be present in the food by consumers, the content of the expected ingredient must be quantified.

6.4 FOOD ADDITIVES

The Codex General Standard for Food Additives defines food additives as:

...any substance not normally consumed as a food by itself and not normally used as a typical ingredient of the food, whether or not it has nutritive value, the intentional addition of which to food for a technological (including organoleptic) purpose in the manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food results, or may be reasonably expected to result (directly or indirectly), in it or its by-products becoming a component of or otherwise affecting the characteristics of such foods. The term does not include contaminants or substances added to food for maintaining or improving nutritional qualities (CAC, 2015a).

The Joint FAO/WHO Expert Committee on Food Additives (JECFA) is an international expert scientific committee administered jointly by the FAO and the WHO which evaluates the safety and develops the specifications of food additives. JECFA provides its scientific advice answering to requests from the Codex Committee on Food Additives (CCFA). The CCFA defines the technological need for a food additive and after receiving JECFA's safety evaluation sets the levels of use for food additives and develops the general standard as the authoritative source on food additives that are accepted internationally. The CCFA collaborates with the relevant Codex commodity committees on use levels, categories and technological need. The CCFA and CCFL develop labelling standards for food additives.

For information about specific food additives see the Codex General Standard and the Codex International Numbering System. More information on JECFA and a database on the output of JECFA's work can be found on FAO's and WHO's websites listed in the resource section.

6.5 LABELLING ALLERGENIC INGREDIENTS

Food allergies occur when there is an abnormal response of the immune system to certain food components. Some allergic reactions may be severe, even fatal. Without information, hypersensitive consumers may not be able to recognize allergenic foods when they are found in mixed food products. Further, the technical terms used to describe ingredients of processed foods may not be understood by consumers. Therefore, when foods contain ingredients made from allergenic foods, the source of the ingredients should be stated in simple language.

Although more than 200 allergens have been identified, regulatory agencies around the world generally agree on the common foods that must be included in the allergy lists. According to the Codex General Standard on Labelling of Prepackaged Food (CAC, 2010), the major categories of foods that should be listed on the label are:

- ◆ Cereals containing gluten; that is, wheat, rye, barley, oats, spelt or their hybridized strains and products of these;
- ◆ Crustacea and products of these;
- ◆ Eggs and egg products;
- ◆ Fish and fish products;
- ◆ Peanuts, soybeans and products of these;
- ◆ Milk and milk products (lactose included);
- ◆ Tree nuts and nut products; and
- ◆ Sulphite in concentrations of 10 mg/kg or more.

The rationale for including specific foods on allergen lists and for exempting other allergenic foods may vary; therefore, each country should assess the risk of food allergies in their national population when developing the list of allergens to be labelled. In addition, precautionary labels may be needed because different food products may be manufactured in the same location and traces of allergenic foods can appear in other foods. For example, some products contain a warning "May contain milk products" "Manufactured in plant using nuts".

6.6 DATE MARKING

Date marking is one of the oldest and most widespread types of information found on food labels. By providing a date mark, the food manufacturer is advising subsequent food chain operators, mainly retailers, distributors, importers and consumers on the appropriate shelf-life of the food. Date marks are determined by the shelf-life of a product after which time the quality or safety of the product may be compromised. Date marking is required on packages of perishable and semi - perishable foods and may be used on products with a long shelf-life.

Date marking serves multiple purposes and is often presented in different ways on packages, which may be specific to the country or region. Different terms have included, but are not limited to Use by, Best before, Sell by, Date of manufacture. The format of the label can vary as well. For food products with a durability of three months or less the date mark often includes the day, month, and year. Retailers and food outlets use this information to manage stocks and manufacturers use the information (in addition to other information on the label) to trace and recall products. Many consumers use date marking to determine whether the food will meet their expectations in terms of quality and whether the product is safe to eat.

With multiple types of date marking, there can be misunderstanding of the label. This confusion can lead to food waste if a consumer throws away food which could have been eaten safely even though the “best by” date has passed. Conversely, lack of clarity may cause a consumer to take a safety risk if they eat a food which should have been discarded because the “use by” date has passed.

General considerations for developing a date marking label policy

Improvements in date marking can be made by assessing the food products found in the local market (domestic and imported), gaining feedback from food manufacturers and consumers, and by considering the requirements for food products that will be exported to other countries. Policy-makers can also gain important guidance from Codex provisions on date marking, as well as considering approaches from other countries. It is important to note that date marking is based on the assumption that the foods are properly stored from the time they leave the manufacturer to the time the food is served to eat. Therefore, the label should outline any special storage conditions to enable the transporters, sellers and consumers to maintain the quality of the product. In addition to the date of minimum durability, any special conditions for the storage of the food must also be declared on the label. For example, ‘refrigerate after opening’ or ‘store in a cool dry place’. The label should contain instructions on how to use the product to enable the consumer to make appropriate use of the food, such as cooking, reheating, preparation or reconstitution instructions or declarations such as ‘not suitable’.

Key questions for designing the date marking regulations include:

- ◆ Which food products must have date marking?
- ◆ Will the date mark be used to convey whether a food is safe to consume?
- ◆ Will the date mark be used to inform the consumer that the quality of the food may deteriorate after the date, but it is still possible to consume the product safely?
- ◆ What is the recommended range of date marks admissible in the country (for all foods including imports)?
- ◆ What should be the recommended language/terminology to present the date mark and what is the recommended format?
- ◆ What are importing countries' requirements for food exports from the country?
- ◆ How much discretion will the food manufacturer have in deciding about the type of date mark and the dates used?
- ◆ What specific technical information is needed to determine the date marking for different categories of products?
- ◆ What are the typical conditions for storing food in the home in the country?
- ◆ How will the public be informed and educated about the meaning of the date mark?
- ◆ Is research needed to understand the ways that date marking is used and understood in the country?

Codex date marking provisions/requirements

In 2016, the Codex Alimentarius Commission updated the section on date marking in the General Standard for the Labelling of Prepackaged Foods (Codex Stan 1-1985) (Joint FAO/WHO Food Standards Programme, 2016). The main features of this standard are provided below.

"Date of Manufacture" means the date on which the food becomes the product as described. This is not an indication of the durability of the product.

"Date of Packaging" means the date on which the food is placed in the immediate container in which it will be ultimately sold. This is not an indication of the durability of the product.

"Best Before Date" or *"Best Quality Before Date"* means the date which signifies the end of the period, under any stated storage conditions, during which the unopened product will remain fully marketable and will retain any specific qualities for which implied or express claims have been made. However, beyond the date the food may still be acceptable for consumption.

“Use-by Date” or *“Expiration Date”* means the date which signifies the end of the period under any stated storage conditions, after which the product should not be sold or consumed due to safety and quality reasons.

The date shall be introduced by the words:

“Use-by<insertdate>” or “ExpirationDate<insertdate>” or “Bestbefore <insertdate>” or “Best Quality Before <insert date>” as applicable where the day is indicated; or

“Use-by end <insert date>” or “expiration date <insert date>” or “Best before <insert date>”; or “Best Quality Before <insert date>” as applicable in other cases.

The day and year shall be declared by uncoded numbers with the year to be denoted by 2 or 4 digits, and the month shall be declared by letters or characters or numbers. Where only numbers are used to declare the date or where the year is expressed as only two digits, the competent authority should determine whether to require the sequence of the day, month, year, be given by appropriate abbreviations accompanying the date mark (for example, DD/MM/YYYY or YYYY/DD/MM).

A date mark shall not be required for a food if the safety is not compromised and quality does not deteriorate because of the preservative nature of the food is such that it cannot support microbial growth (for example, alcohol, salt, acidity, low water activity). In addition, a date mark is not required where the deterioration is evident to the consumer; where the key/organoleptic quality aspects of the food are not lost; and where the food is intended to be consumed within 24 hours of its manufacture. In such cases, the “Date of Manufacture” or the “Date of Packaging” may be provided.

Any special conditions for the storage of the food shall be declared on the label if where they are required to support the integrity of the food.

7 NUTRITION INFORMATION ON PACKAGES

As scientific evidence linking diet and health expands and deepens, the need to provide more nutritional information to consumers has been recognized. One of the main drivers for nutrition labelling is the increased prevalence of diet-related noncommunicable diseases. Labelling is useful for promoting consumption of foods containing vitamins, minerals and protein as well. The main types of nutrition labels are described below.

7.1 NUTRIENT DECLARATION (MANDATORY AND VOLUNTARY)

A nutrient declaration label is a standardized statement or listing of the nutrient contents of a food. Codex recommends that this should be mandatory on all packaged foods except where national circumstances would not support such declarations. The declaration must be on all packaged foods that carry a nutrition claim. Nutrient declarations can be presented per serving or per 100g/100ml; and if expressed per serving or portion, the serving size or number of portions contained in the package should be stated. Serving size must be based on the food as it is sold. For foods requiring preparation and foods commonly mixed with other ingredients or another food before being eaten (for example, pudding mix, soups or breakfast cereal with milk), information on the food as prepared can also be included. Food labelling laws that mandate that the nutrient declaration must be made by serving size often have standardized predefined serving sizes or a range of serving sizes to allow flexibility set by national governments based on national dietary intake data.

MANDATORY NUTRIENTS

Where nutrient declaration is applied, the following nutrients must be included: energy value (calories), amounts of protein, available carbohydrate (that is, dietary carbohydrate excluding dietary fibre), total fat, saturated fat, sodium (or salt equivalent) and total sugars must be declared. Additionally, the amount of any other nutrient that is considered to be relevant for maintaining good nutritional status in national legislation or national dietary guidelines must be declared.

Calculations and food composition

It is the manufacturer's responsibility to ensure that the declared values accurately reflect the contents of the product. Although manufacturers can determine the energy value directly through analysis, the energy value is usually calculated by analyzing the protein, fat and carbohydrate levels for these nutrients and then multiplying them by the Atwater conversion factors, unless a different factor is given in a Codex standard or in the Codex method of analysis for that food.

Several public websites are available for calculating the nutritional composition of foods. Information about such databases can be found on the FAO INFOODS website: (www.fao.org/infoods/infoods/en/). It should be noted that food composition data used in these applications represent an average of the nutrient content of a particular sample of foods and ingredients, determined at a particular time, which can vary substantially between different batches and brands. Such differences can be the result of a number of factors, including changes in season, processing practices, and ingredient sources. Before relying on calculated nutritional values generated by food databases, a manufacturer should carefully evaluate the accuracy, completeness and relevance of the results for their purposes. Manufacturers should obtain expert advice in developing their nutrition labels. When developing the labelling policies, authorities should provide guidance on food composition.

7.2 NUTRIENT REFERENCE VALUES

When making the nutrient declaration, information on protein and additional nutrients may be expressed as percentages of the Nutrient Reference Values (NRV) where an NRV has been established. NRVs are a set of numerical values that are based on scientific data associated with nutrient requirements or associated with the reduction in the risk of diet-related noncommunicable diseases. NRVs are derived for the purposes of nutrient declaration and relevant claims on food labels.

The nutrients within the nutrient declaration can be presented as the % NRV. The % NRV provides a quick overview of the nutrient levels in a food. A consumer can use the % NRV to compare two different food products to help choose foods that are higher in the nutrients they desire and lower in the nutrients they want to reduce or avoid. For optional nutrients, values <5% NRV should not be declared.

Codex provides NRV values for many vitamins and minerals, as well as protein. One type of NRV is the *Nutrient Reference Values - Requirements (NRVs-R)* which refer to NRVs that are based on levels of nutrients associated with nutrient requirements. Table 3 lists the established NRVs-R for the general population identified as individuals older than 36 months.

TABLE 3 - KEY NUTRITION REFERENCE VALUES (NRV)

Protein (g)	50
Vitamin A (µg)	800*
Vitamin D (µg)	5**
Vitamin C (mg)	100
Thiamin (mg)	1.2
Riboflavin (mg)	1.2
Niacin (mg NE)	15**
Folate (µg DFE)	400
Vitamin B12 (µg)	2.4
Pantothenate (mg)	5
Calcium (mg)	1,000
Iron (mg)	14
Zinc (mg)**	11 (30% dietary absorption; Mixed diets, and lacto-ovo vegetarian diets that are not based on unrefined cereal grains or high extraction rate (>90%) flours) 14 (22% dietary absorption; Cereal-based diets, with >50% energy intake from cereal grains or legumes and negligible intake of animal protein)
Iodine (µg)	150**
Selenium (µg)	60

* For the declaration of β-carotene (provitamin A) the following conversion factor should be used:
1 µg retinol = 6 µg β-carotene

** Competent national and/or regional authorities should determine an appropriate NRV-R that best represents the dietary absorption from relevant diets.

Adapted from: Codex Alimentarius (2015) Guidelines on Nutrition Labelling CAC/GI 2-1985
Adopted in 1985. Revision: 1993 and 2011. Amendment: 2003, 2006, 2009, 2010, 2012 and 2013.
ANNEX adopted in 2011. Revision: 2013 and 2015.

In addition, Codex has defined *Nutrient Reference Values - Noncommunicable Disease (NRVs-NCD)* which refer to NRVs that are based on levels of nutrients associated with the reduction in the risk of diet-related noncommunicable diseases not including nutrient

deficiency diseases or disorders. Three NRVs-NCD have been established to date and others are under discussion (for example EPA and DHA Long chain Omega 3 fatty acids):

Saturated fatty acids at 20 g (intake levels not to exceed)

Sodium at 2000 mg (intake levels not to exceed)

Potassium at 3 500 mg (intake levels to achieve)

Nutrient declarations are usually presented in a standard format on the back of the package or side of the package.

Some countries have established their own NRVs based on recommendations that have been developed using data from their own population such as the Daily Value (DV) adopted in the USA and Canada, or Daily Intake (DI) in Australia. It is recommended that expert advice be sought when setting country-specific NRVs for national labels.

Figure 2 - Nutrient declaration labels

Nutrition Facts	
Per state [serving size]	
Amount per serving	
Calories	80
% Daily Value	
Fat 0 g	0 %
Saturated 0 g + Trans 0 g	0 %
Cholesterol 0 mg	0 %
Sodium 140 mg	6 %
Carbohydrates 19 g	6 %
Fibre 2 g	8 %
Total Sugars 11 g	
Protein 2 g	
Vitamin X	4 %
Vitamin Y	15 %
Mineral X	
Mineral Y	

7.3 NUTRIENT CLAIMS

In addition to the nutrient declaration, nutrient claims can be made on the food label on a voluntary basis. The use of nutrient claims on the food label is under the discretion of the food company as long as the food meets the criteria, as outlined in national food labelling legislation in the country where it is being sold. Therefore, it is important to have criteria defined within food labelling legislation to prevent misleading or false claims.

Nutrition Claims are any representation which states, suggests or implies that a food has particular nutritional properties. Usually, the only nutrition claims permitted shall be those relating to energy, protein, carbohydrate, and fat and components thereof, fibre, sodium and vitamins and minerals for which Nutrient Reference Values (NRVs) established in the Codex Guidelines for Nutrition Labelling (CAC/GL 2 – 1985).

Nutrition claims can be categorized as either nutrient content or nutrient comparative claims.

Nutrition

Typical values	100g contains	Each slice (typically 44g) contains	% RI*	RI* for an average adult
<u>Energy</u>	985kJ 235kcal	435kJ 105kcal	5%	8400kJ 2000kcal
<u>Fat</u>	1.5g	0.7g	1%	70g
of which <u>saturates</u>	0.3g	0.1g	1%	20g
<u>Carbohydrate</u>	45.5g	20.0g		
of which <u>sugars</u>	3.8g	1.7g	2%	90g
Fibre	2.8g	1.2g		
<u>Protein</u>	7.7g	3.4g		
<u>Salt</u>	1.0g	0.4g	7%	6g

This pack contains 16 servings

*Reference intake of an average
adult (8400kJ / 2000kcal)

Nutrition Information	Per 100g	Per serving (40g)
Energy	1150kJ/4270kcal	700kJ/170kcal
Protein	13g	9g
Carbohydrate (of which sugars)	46g (18g)	25g (14g)
Fat (of which saturates)	3.5g (0.6g)	3.5g (1.5g)
Fibre	29g	12g
Sodium	0.9g	0.4g
Vitamins		(%RDA)
Vitamin D	3.1µg	(65)
Thiamin (B1)	0.9mg	(65)
Minerals		(%RDA)
Calcium	340mg	(45)
Iron	8.8mg	(65)

TABLE 4 - TYPES OF NUTRITION CLAIMS*

CLAIM	DESCRIPTION	EXAMPLE
<i>Nutrient content claims</i>	Level of a nutrient contained in a food. Codex outlines criteria for use of different nutrient content claims.	“source of calcium”; “high in fibre”; “low in fat”; “free of trans fat”
<i>Nutrient comparative claims</i>	<p>Claim compares nutrient levels and/or energy value of two or more foods.</p> <p>Claims are subject to the following conditions: a) foods being compared should be different versions of the same food or similar foods; b) foods being compared should be clear and easily identifiable by consumers; c) statement of the amount of difference in the energy value or nutrient content should be given in close proximity to the comparative claim; d) difference should be based on a relative difference of at least 25% in the energy value or nutrient content, except for micronutrients other than sodium, where a 10% difference in the NRV would be acceptable.</p> <p>The amount of difference related to the same quantity of food can be expressed as a percentage, fraction, or an absolute amount with full details of the comparison given.</p> <p>The use of the word “light” should follow the same criteria as for “reduced” and include an indication of the characteristics which make the food “light”.</p>	<p>“reduced in salt”; “less fat than...”; “more fibre than...”</p> <p>“Reduced in salt. Cracker X has 25% less salt than the leading cracker on the market”</p>
<i>Non-Addition claims</i>	<p>Claim states that sugar or sodium or salt has not been added to the food. Non-addition claims are subject to additional conditions. Sugar provides an example:</p> <p>No sugars of any type have been added to the food (e.g., sucrose, glucose, honey, molasses, corn syrup etc.)</p> <p>The food contains no ingredients that contain sugars as an ingredient (e.g., jams, jellies, sweetened chocolate, sweetened fruit pieces, etc.);</p> <p>The food contains no ingredients containing sugars that substitute for added sugars (e.g., concentrated fruit juice, dried fruit paste, etc.); and</p> <p>The sugars content of the food itself has not been increased by some other means (e.g., the use of enzymes to hydrolyse starches to release sugars)</p>	<p>“no added sugar” “no added salt”</p>

*Adapted from the Codex *Guidelines for the Use of Nutrition and Health Claims* (CAC/GL 23-1997).

7.4 FRONT OF PACK NUTRITION LABELLING

Experience and research indicate that consumers often need more guidance for selecting foods for a healthy diet than is given by nutrient declarations, ingredient lists and claims. Front of Package (FOP) systems and symbols summarize key nutritional aspects and characteristics of food products and often integrate characteristics of traditional nutrition labels, as well as nutrition and health claims. The FOP label is easily seen in the market and attracts consumers' attention. These labels are typically found on a product's principal display panel, but may be elsewhere on the food label.

Research has also demonstrated that simplified labels promote more accurate evaluations of foods by consumers. In the United States of America, the Institute of Medicine (IOM, 2010) classified FOP systems and symbols in use internationally at the time, these included:

Nutrient-specific systems: These are either systems that display the amount per serving of calories or select nutrients from the nutrient declaration on the front of pack, or symbols based on nutrition or health claim criteria..

Summary indicator systems: These are symbols, icons, or scores that provide summary information about the nutrient content of a food but give no specific nutrient content information to consumers. Summary indicator systems attempt to assess the overall healthiness of a food using either thresholds or algorithms. Threshold-based systems typically establish maximum levels for nutrients to limit, and minimum levels for nutrients or food components to encourage, to judge whether a product qualifies for a summary indicator symbol. Algorithm-based systems award points for the presence of nutrients or food components to encourage and subtract them for the presence of nutrients to limit to arrive at a final score that is used as the summary indicator symbol.

Food group information systems: These include symbols that indicate that a food group (such as vegetables and fruit) or a food ingredient important to the diet (such as whole grains) is present in a food product.

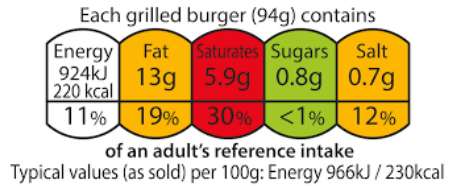
At the present time, most countries do not have specific regulations for FOP nutrition rating systems and Codex has not provided guidance on this type of label. However, at the 43rd Session of the Codex Committee on Food Labelling held in May 2016, the Committee agreed to establish an electronic Working Group to consider the need for development of global principles to underpin front-of-pack nutrition labelling (Joint FAO/WHO Food Standards Programme (2016). In Norway, Sweden, Finland and Iceland, a regional "keyhole" FOP has been used for a number of years. Australia and New Zealand have released a "healthy star" FOP recently. The United Kingdom has developed a "traffic light" FOP over several years. In Europe and the USA, governments have begun to pursue strategies to standardize voluntary FOP systems with government-developed nutrient profiling criteria.

FIGURE 3 - Examples of Front of Pack labels from Norway, United Kingdom and Australia

Nordic key hole
 Healthy choices made easy
 (official slogan)



Example of a UK
 Front of Pack label



Australia Healthy Star
 Food of Pack symbol



7.5 HEALTH CLAIMS

Codex does not outline specific health claims for use on labels or their criteria. Permitted health claims and their criteria are defined and approved by the national authority in each country to avoid false, misleading and unsubstantiated claims. Products should only bear a health claim if the claim is approved in the country where the product is being sold. A health claim should be approved if the claim is substantiated with current relevant scientific evidence and should be re-evaluated when new knowledge becomes available. Additional information is provided by Codex to help competent national authorities in their evaluation of the evidence for the scientific substantiation of health claims. It is recommended that expert advice be sought when establishing a framework for health claim substantiation. Overall, substantiation of a health claim involves a systematic review of the scientific evidence. This often includes the following tasks:

- ◆ Identify the proposed relationship between the food or food constituent and the health effect;
- ◆ Identify appropriate valid measurements for the food or food constituent and for the health effect;
- ◆ Identify and categorize all the relevant scientific data;
- ◆ Assess the quality of and interpret each relevant scientific study;
- ◆ Evaluate the totality of the available relevant scientific data (published and unpublished when available), weigh the evidence across studies and determine if, and under what circumstances, a claimed relationship is substantiated.

The evidence used to substantiate a health claim should be based on well-designed human interventions demonstrating a consistent association between the food or food constituent and the health effect when consuming a reasonable amount of the food or food constituents. Other types of studies are generally not sufficient to substantiate a health claim on their own.

The systematic review can be carried out by national authorities or the systematic review can be conducted by industry applicants and submitted to national authorities for review and approval. Both approaches benefit from consulting expert advice on the specific food and health relationship. Some countries have published scientific and technical guidance on how to prepare a submission for health claim approval (see the Resource section for examples).

TABLE 5 - TYPES OF HEALTH CLAIMS

CLAIM	DESCRIPTION	EXAMPLE
<i>Nutrient function claim</i>	<p>Describes the physiological role of the nutrient in growth, development and normal functions of the body.</p> <p>Only essential nutrients for which a Nutrient Reference Value (NRV) has been established in the Codex Guidelines on Nutrition Labelling or those nutrients mentioned in officially recognized dietary guidelines of the national authority having jurisdiction should be the subject of a nutrient function claim.</p>	<p>“Nutrient A (naming a physiological role of nutrient A in the body in the maintenance of health and promotion of normal growth and development). Food X is a source of/ high in nutrient A.”</p>
<i>Other function claims</i>	<p>These claims concern specific beneficial effects of the consumption of foods or their constituents, in the context of the total diet on normal functions or biological activities of the body. Such claims relate to a positive contribution to health or to the improvement of a function or to modifying or preserving health.</p>	<p>“Substance A (naming the effect of substance A on improving or modifying a physiological function or biological activity associated with health). Food Y contains x grams of substance A.”</p>
<i>Reduction of disease risk claims</i>	<p>Claims relating the consumption of a food or food constituent, in the context of the total diet, to the reduced risk of developing a disease or health-related condition.</p> <p>Risk reduction means significantly altering a major risk factor(s) for a disease or health-related condition. Diseases have multiple risk factors and altering one of these risk factors may or may not have a beneficial effect. The presentation of risk reduction claims must ensure, for example, by use of appropriate language and reference to other risk factors, that consumers do not interpret them as prevention claims.</p>	<p>“A healthful diet low in nutrient or substance A may reduce the risk of disease D. Food X is low in nutrient or substance A.”</p> <p>“A healthful diet rich in nutrient or substance A may reduce the risk of disease D. Food X is high in nutrient or substance A.”</p>
<i>Claims related to dietary guidelines or “healthy diets”</i>	<p>These claims are permitted under the following conditions:</p> <p>a) Only claims related to the pattern of eating contained in dietary guidelines officially recognized by the appropriate national authority.</p> <p>b) Flexibility in the wording of claims is acceptable, provided the claims remain faithful to the pattern of eating outlined in the dietary guidelines.</p> <p>c) Claims related to a “healthy diet” or any synonymous term are considered to be claims about the pattern of eating contained in dietary guidelines and should be consistent with the guidelines.</p> <p>Foods which are described as part of a healthy diet, healthy balance, etc., should not be based on selective consideration of one or more aspects of the food. They should satisfy certain minimum criteria for other major nutrients related to dietary guidelines.</p> <p>d) Foods should not be described as “healthy” or be represented in a manner that implies that a food in and of itself will impart health.</p> <p>e) Foods may be described as part of a “healthy diet” provided that the label carries a statement relating the food to the pattern of eating described in the dietary guidelines.</p>	<p>“Increased intakes of fruits, vegetables, whole grains, and fat-free or low-fat dairy products are part of a healthy diet and likely to have important health benefits”</p>

When approving a health claim for use in the marketplace, it is important to consider if the amount of the food or food constituent exposes the consumer to health risks or known interactions that may pose health risks and/or exceeds relevant upper levels of intake for the food or other constituents. Exposure assessments should be conducted and be based on an evaluation of the distribution of usual total daily intakes for the general population and, where relevant, for vulnerable population sub-groups.

Clear qualifying and/or disqualifying conditions for eligibility for foods to use the specific claim should be established. Claims on foods that contain nutrients or constituents in amounts that increase the risk of disease or an adverse health-related condition should be prohibited.

The Codex General Guidelines on Claims details a number of general principles regarding the use of claims on foods, including prohibited claims and potentially misleading claims.

The following claims should be prohibited:

- ◆ Claims stating that any given food will provide an adequate source of all essential nutrients, except in the case of well-defined special purpose foods, outlined in a Codex standard;
- ◆ Claims implying that a balanced diet or ordinary foods cannot supply adequate amounts of all nutrients;
- ◆ Claims which cannot be substantiated.
- ◆ Claims as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder, or particular physiological unless they are in accordance with the provisions of Codex standards or guidelines for foods;
- ◆ In the absence of an applicable Codex standard or guideline, permission under the laws of the country in which the food is distributed;
- ◆ Claims which could give rise to doubt about the safety of similar food or which could arouse or exploit fear in the consumer.

The Codex provides a few examples of claims which may be misleading and should be avoided:

- ◆ Meaningless claims including incomplete comparatives and superlatives;
- ◆ Claims as to good hygienic practice, such as “wholesome”, “healthful”, “sound”

Examples of misleading labels are shown below:

- ◆ A product labelled as “natural” must not contain synthetic or artificial ingredients; but it may still be heavily processed or contain substances which many consumers would not think of as natural.

- ◆ A product claims to be “healthy” but contains high amounts of fat, saturated fat, cholesterol, sugar or sodium that would not be deemed to be healthy.
- ◆ A product that claims to be “Made with Whole Grains” or “Made with Real Fruit” when the product in fact contains very little whole grains or real fruit.

Ambiguous health statements such as “helps maintain a healthy heart” or “supports the immune system” are not upheld to the same standards as reduction of disease risk claims although consumers may not always perceive the difference.

SUMMARY

Food labelling is a useful tool to protect consumer health in terms of food safety and nutritional well-being, and to prevent fraudulent practices and misleading information. A food labelling policy includes a set of laws and guidelines establishing the information that must be provided on a food label. In all countries, there should be minimum requirements for labelling of packaged foods to ensure that consumers have clear non-misleading information about the product identity, content, intended use and any appropriate safety and nutrition considerations. Even when labelling is voluntary, guidance is needed to prevent inappropriate labels.

A food label policy should include strategies to assist producers to comply with labelling rules and education programmes to help consumers to understand and use labels. The policy should define the various agencies and organizations that will be responsible for implementing the policy and provide resources to support the policy. Through consultative processes, the various stakeholders in labelling should be able to contribute their views about the labelling policy to ensure transparency and build trust.

With the wide variety of information in the marketplace, consumers may become confused about some labelling of food products. Simple, standardized, non-misleading labelling can facilitate consumer understanding so that consumers are able to easily recognize important information and feel confident about the product information.

Harmonization of food labels is desirable from the perspective of food producers as well as consumers. Codex labelling texts provide a useful resource to harmonize national labelling requirements or to create such requirements if they do not exist. The World Trade Organization is responsible for two agreements that are relevant to food labelling to protect and promote human health: the Agreement on Technical Barriers to Trade (TBT) and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS).

Developing an effective food labelling policy requires scientific expertise in nutrition, food science and food technology. Legal expertise and economic analysis are needed as well. Finally, consumer and communication specialists should be involved in the development of labels to ensure that the labels are understood and useful for the people for whom labels are intended, the ordinary citizen.

RESOURCES

National and regional authorities

Australia and New Zealand

Food Standards Australia and New Zealand label website

www.foodstandards.gov.au/industry/labelling/Pages/default.aspx

Food standards code Australia New Zealand

www.foodstandards.gov.au/code/Pages/default.aspx

Industry guidance Australia New Zealand

www.foodstandards.gov.au/industry/Pages/default.aspx

Consumer guidance Australia New Zealand

www.foodstandards.gov.au/consumer/Pages/default.aspx

Date marking Users' Guide

<https://www.foodstandards.gov.au/code/userguide/Documents/Guide%20to%20Standard%201.2.5%20-%20Date%20Marking%20of%20Food.pdf>

Guidance on health claims

www.foodstandards.gov.au/publications/Documents/FINAL%20Guidance-general-level-health-claims-Sept%202013.pdf

Canada

Guide to Food Labelling and Advertising, Canadian Food Inspection Agency

www.inspection.gc.ca/food/labelling/guide-to-food-labelling-and-advertising/eng/1300118951990/1300118996556

Guidance on health claims

www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/legislation/health-claims_guidance-orientation_allegations-sante-eng.pdf

Chile

Chile Ministry of Health Food Label law (in Spanish)

web.minsal.cl/reglamento-de-la-ley-de-etiquetado-de-alimentos-descarga/

European Commission

Labelling and nutrition

http://ec.europa.eu/food/food/labellingnutrition/index_en.htm

European Union

Guidance on health claims

www.efsa.europa.eu/en/efsajournal/pub/2170.htm

Japan

Health claims, foods for special dietary uses and nutrition labelling

Japanese Ministry of Health, Labor and Welfare

www.mhlw.go.jp/english/topics/foodsafety/fhc/index.html

Mexico

Mexico Ministry of Health (in Spanish)

www.gob.mx/salud

Mexico National Institute of Public Health (in Spanish)

www.insp.mx

New Zealand

Food labelling guide

www.foodsafety.govt.nz/elibrary/industry/nzfsa-food-labelling-guide/labelling-guide0-all-nzfsa-v2-labelling-guide-web.pdf

Sweden

National Food Agency

www.livsmedelsverket.se/en/

South Africa

South Africa Food Data System with label information

safoods.mrc.ac.za/index.html

Thailand

Thailand Food and Drug Administration

www.fda.moph.go.th/eng/food/laws.stm

United Kingdom

UK Food Standards Agency

www.food.gov.uk/the-website-of-the-food-standards-agency

Food labelling and packaging

<https://www.gov.uk/food-labelling-and-packaging/overview>

Food Information Regulations 2014: Summary guidance for food business operators and enforcement officers in Scotland, Wales and Northern Ireland

www.food.gov.uk/sites/default/files/fir-guidance2014.pdf

Food Fraud

www.food.gov.uk/enforcement/enforcework/foodfraud/#.UyB5PfldX44

United States of America

Guidance for Industry: A Food Labeling Guide, U.S. Food and Drug Administration

www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm2006828.htm

www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm073332.htm

U.S. Department of Agriculture Food Safety and Inspection Service

www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/labeling/labeling-policies/basics-of-labeling/basics-labeling

International bodies

FAO information on nutrition

www.fao.org/nutrition/en/

FAO information on food quality and safety

www.fao.org/food/food-safety-quality/home-page/en/

WHO information about nutrition

www.who.int/nutrition/en/

WHO information about food safety

www.who.int/foodsafety/en/

FAO information about food additives

www.fao.org/food/food-safety-quality/scientific-advice/jecfa/en/

WHO information about food additives

www.who.int/foodsafety/en

World Trade Organization

<https://www.wto.org>

REFERENCES

- CAC (Codex Alimentarius). *Class names and the international numbering system for food additives* (CAC/GL 36-1989).
- CAC. *General Guidelines on Claims* (CAC/GL 1-1979).
- CAC. *General Standard for Food Additives* Codex Stan 192-1995 Adopted in 1995. Revision: 1997, 1999, 2001, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015.
- CAC. *General Standard for the Labelling of and Claims for Prepackaged Foods for Special Dietary Uses* (CODEX STAN 146-1985).
- CAC. *General Standard for the Labelling of Prepackaged Foods* (CODEX STAN 1-1985). Adopted 1985. Amended 1991, 1999, 2001, 2003, 2005, 2008 and 2010.
- CAC. *Guidelines on Nutrition Labelling* CAC/GL 2-1985 Adopted in 1985. Revision: 1993 and 2011. Amendment: 2003, 2006, 2009, 2010, 2012 and 2013. ANNEX adopted in 2011. Revision: 2013 and 2015.
- CAC. *Guidelines for the Use of Nutrition and Health Claims* (CAC/GL 23-1997).
- EU (European Union). 2011. Regulation (EU) No 1169/2011 of the European Parliament and of the Council. *Official Journal of the European Union* L 304 Volume 54, 22 November. 18-41.
- FAO/WHO. 2003. *Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems*, No. 76. Rome.
- FAO/WHO. 2007. *Codex Alimentarius Food Labelling (Fifth edition)*, Rome.
- FAO/WHO. 2014a. *Conference Outcome Document: Rome Declaration on Nutrition*, Second International Conference on Nutrition, 19-11 November, Rome.
- FAO/WHO. 2014b. *Conference Outcome Document: Framework for Action*, Second International Conference on Nutrition, 19-11 November, Rome.

- GATT (General Agreement on Tariffs and Trade). 1994. *Agreement on Technical Barriers to Trade*. Marrakesh Agreement Establishing the World Trade Organization, The Legal Texts: The Results of the Uruguay Round of Multilateral Trade Negotiations, April 15, 1994.
- IOM (Institute of Medicine). 2010. *Examination of Front-of-Package Nutrition Rating Systems and Symbols: Phase I Report*. National Academies Press, Washington, D.C.
- Joint FAO/WHO Food Standards Programme. 2010. Codex Alimentarius Commission Thirty-third Session Geneva, Switzerland, 5 - 9 July 2010. Report of the Thirty-eighth Session of the Codex Committee on Food Labelling, Quebec City, Canada, 3-7 May 2010 ALINORM 10/33/22.
- Joint FAO/WHO Food Standards Programme. 2016. Codex Alimentarius Commission Thirty-ninth Session, Rome, Italy 27 June-1 July 2016 Report of the Forty-third Session of the Codex Committee on Food Labelling Ottawa, Canada 9-13 May 2016 REP16/FL.
- WTO (World Trade Organization). 2010. *The WTO agreements series Sanitary and Phytosanitary Measures*. Geneva.
- WTO. 2014. *The WTO agreements series Technical Barriers to Trade*. Geneva.

Food labelling is a useful tool to protect consumer health and to prevent fraudulent practices. The handbook explains the general principles and good practices for food labelling, including international standards for labelling. Specific types of labels are explained such as ingredient lists (including allergen and food additive information), date marking, nutrition labels (back of pack panels and front of pack systems) as well as nutrient and health claims. The steps for developing a labelling policy are explained and sources of information from national and international authorities are provided.

ISBN 978-92-5-109547-8



9 789251 095478

I6575EN/1/11.16