Review Article

Nutrition labelling and claims: Concerns and challenges; experiences from the Asia Pacific Region

E-Siong Tee PhD

Cardiovascular, Diabetes and Nutrition Research Centre, Institute for Medical Research, Kuala Lumpur, Malaysia

The present report provides an overview of the situation of nutrition labelling, nutrition claims and health claims in several countries in the Asia Pacific region. The regulatory requirements of six countries in South-East Asia (Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand), two other countries in Asia (China and Japan) and Australia–New Zealand are reviewed. With the exception of the recently introduced Joint Food Standards Code of Australia–New Zealand and the proposed new regulations in Malaysia, there is no mandatory nutrition labelling requirements for a wide variety of foods in all these countries. Many countries, however, require nutrition labelling to be made compulsory for special categories of foods (e.g. foods for special dietary use) and when nutritional claims are made for fortified or enriched foods. Nevertheless, several food manufacturers, especially multinationals, do voluntarily label the nutritional content of a number of food products. There is therefore increasing interest among authorities in countries in the region to start formulating regulations for nutrition labelling for a wider variety of foods. Australia, New Zealand and Malaysia have proposed new regulations to make it mandatory to label a number of foodstuffs with a number of core nutrients. Other countries prefer to start with voluntary labelling by the manufacturers, but also spell out the requirements for voluntary labelling. The format and requirements for nutrition labelling differ widely for countries in the region. Some countries (e.g. Malaysia) have followed the Codex guidelines on nutrition labelling in terms of format, components to be included and mode of expression rather closely. Other countries, such as the Philippines and Thailand, have drafted nutrition labelling regulations very similar to those of the Nutrition Labelling and Education Act of the USA. Nutrition claims are also not specifically permitted under current regulations in most of the countries reviewed. However, various food products on the market can be found with a variety of nutrition (and even health) claims. It is feared that without proper regulations, the food industry is not certain what claims are permitted to be made. Excessive and misleading claims made by irresponsible manufacturers would serve only to confuse and mislead the consumer. There are therefore also efforts in countries in the region to enact regulations on nutrition claims. Japan has detailed requirements for making nutrition claims such as 'high', 'source of', 'free', and 'low'; these criteria are not the same as those recommended by Codex. Malaysia has initiated the process to enact regulations to clearly stipulate the permitted nutrition claims and the conditions required to make these claims. The proposed regulations are closely aligned to the guidelines of Codex. Most of the other countries also permit some nutrition claims to be made, with varying degree of resemblance to Codex guidelines. Health claims are not permitted in most of the countries in the region. Some countries have specifically prohibited health claims to be made for foods. The exception is Japan, which has permitted health claims to be made for a group of foods approved to be foods for specified health uses (FOSHU). These may be considered to be functional foods, and presently approximately 200 of them have been approved by the Ministry of Health and Welfare. This is, however, a rather unique system wherein approval is given to individual items based on scientific data submitted. China too has permitted health claims to be made on specific foods that are termed health foods. A health claim phrase permits a simple description or statement of the health functions of the food product. These health foods shall also be preapproved by the Ministry of Health prior to marketing. Indonesia and the Philippines are only two countries in the Association of South-East Asian Nations (ASEAN) region that allow limited health claims to be made, similar to those permitted by the USA. There are more differences than similarities in the regulations on nutrition labelling and claims among countries in the Asia Pacific region. It is important for discussions to be held among countries in the region for greater collaboration in the enactment of regulations on nutrition labelling and health claims. Although a single nutrition label may not be practical for the region, closer agreements in minimum requirements would benefit food industries. Similarly, more similarities in the requirements for nutrition claims would facilitate regional trade. Health claims is an even more complex subject for the region and regulatory agencies would be cautious in its development. One of the major challenges in promulgating requirements for nutrition labelling and claims is to ensure that the consumer understands the label and that it assists them in making an appropriate food choice. The ability of small- and medium-scale industries to comply with the proposed regulations is also an important concern. Other concerns include the laboratory capabilities or other means of arriving at the nutrient levels for declaration, an efficient mechanism for processing applications for nutrition and health claims and the monitoring and evaluation of these regulations.

Correspondence address: Dr ES Tee, Head, Cardiovascular, Diabetes and Nutrition Research Centre, Institute for Medical Research, 50588 Kuala Lumpur, Malaysia.
Tel: + 603 2698 6704; Fax: + 603 2694 3575
Email: president@nutriweb.org.my

Key words: food regulations, health claims, nutrition claims, nutrition labelling.

Introduction

The nutrition scenario in the Asia-Pacific region has changed dramatically in the last two decades. and among the urban segments of the community in particular, diet-related chronic diseases have been on the rise. The main cause of deaths in most of these developing countries in the region is coronary heart disease. With the increase in these diseases in the region, there has been greater focus on the role of nutrition in the disorders. Consumers are paying greater attention to the nutritional value of their diets. The food industries are also increasing their efforts to improve the nutritional value of foods, including increasing concentration of some nutrients while decreasing some of the others. Government agencies and non-governmental organizations have intensified efforts to promote healthy dietary practices.

Nutrition labelling of foods is one of the strategies adopted to assist consumers in adopting healthy dietary practices. The primary objective of nutrition labelling is to describe the nutritional qualities of a food product factually and informatively. It is aimed at providing a means for conveying information of the nutrient content on the label, thereby assisting consumers in making better food choices when planning their daily meals. Although nutrition education is not the primary aim of nutrition labelling, it does supplement nutrition education activities because it encourages the use of sound nutrition principles in the formulation of meals for family members.

Nutrition labelling is equally important to the food industry because labelling provides a means for food manufacturers and retailers to become more aware of the nutritional properties of their products, and be encouraged to emphasize these properties to consumers. Food manufacturers have a social responsibility to contribute positively to the healthy lifestyle programmes of the health authorities. There is increasing interest in developing nutrition labelling around the world, even for developing countries, and a wide range of types and approaches are now being practised.

Similarly, there has been increased interest in nutrition and health claims in many countries. The food industry has deemed it beneficial to inform the consumer of various health properties of their products through such claims. It may also be viewed as additional ways of informing the consumer of the health benefits of various nutrients and food components. The health authorities, however, have to ensure that such claims are accurate, truthful and based on scientitic evidence. This is to avoid misleading the consumer as well as ensuring fair practices in food trade. These are areas of active research and development by the food industry. Regulatory agencies are busy trying to understand these claims and determining if they can be permitted. The consumer is grappling with understanding what these claims mean to them and their family.

There has been increasing interest in nutrition labelling and claims in the Asia-Pacific region as well in recent years. The present paper aims to provide a thorough review of the status of nutrition labelling, nutrition and health claims in several countries in the region. This includes selected South-East Asian countries, namely Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand, two east Asian countries, namely China and Japan, and Australia and New Zealand. The food regulations and other relevant documents from these countries were obtained as sources of information for the present paper. The extent of similarities and differences in the existing regulations are examined. The paper also discusses some of the concerns and challenges of the promulgation and implementation of regulations on nutrition labelling and claims in the region.

Nutrition labelling in Malaysia

There is currently no mandatory nutrition labelling of foods in Malaysia, except for regulations pertaining to the labelling of 'special purpose foods'. Regulations 388–393 of the Malaysian Food Regulations 1985 provides for obligatory nutrition labelling of foods such as infant formulae and cereal-based foods for infants and young children.[1] These foods are to be labelled with the energy, protein, carbohydrate, fat, vitamin and mineral contents. In addition, as provided for under regulation 26, foods enriched or fortified with permitted vitamins, minerals, essential amino acids or essential fatty acids shall be labelled with the type and quantity of the nutrient.

There are, however, a number of products in the market now with voluntary nutrition labelling, most of which are imported foods. There is no uniformity in the various formats used in nutrition labelling. Some of these labels are very brief, with only a few nutrients, whereas others go to the full extent of listing over 15 nutrients. Some are expressed as per 100 g (or per 100 mL) whereas others refer to amounts per serving. Some of the labels express the amounts in relation to recommended daily intakes (RDI or RDA).

In August 2000 the Ministry of Health announced the intention to amend the current regulations to have mandatory nutrition labelling for a wide variety of foods.[2,3] The proposal is to have mandatory labelling for a number of core nutrients, namely energy, carbohydrates, protein and fat for a wide variety of foods. The categories of foods requiring labelling include the following: (i) prepared cereal foods; (ii) bread; (iii) milk and powdered milk products; (iv) canned meat, canned fish; (v) canned vegetables; (vi) canned fruit and fruit juices; and (vii) soft drinks and botanical beverages.

The proposed format for labelling closely follows the Codex guidelines.[4] Nutrients are to be declared in per 100 g or per 100 mL or per package if the package contains only a single portion. In addition, this information must be given per serving as quantified on the label. Nutrients may also be given as a percentage of the nutrient reference value.

The proposal has received comments from various organizations, the food industry and consumer bodies. A number

of seminars, including several outside Kuala Lumpur, have also been organized to further familiarize the food industry with the proposed regulations. Particular attention was also given to encourage small- and medium-scale industries to attend such seminars. The proposed amends are expected to be gazetted soon.

Discussions within the Ministry of Health on the implementation of the proposed nutrition labelling included conducting consumer education activities. This has, in fact, long been in the agenda of the Ministry of Health as one of the prime messages disseminated to the public through the Healthy Eating Programme launched by the Ministry of Health. Leaflets to promote the 'read the label' habit among consumers were also published with the different elements of the food label explained, including the listing of nutrients. It is recognized that a great deal remains to be done in terms of consumer education. This can be facilitated through collaborative efforts with professional bodies such as the nutrition, dietetics and food science societies in the country.

Health and nutrient claims in Malaysia

There are no elaborate provisions for health and nutrition claims in the 1985 Malaysian Food Regulations.[1] Nevertheless, there are several labelling requirements that are related to health and nutrition claims. For example, regulation 18(3) prohibits the description of any food that includes the word 'compounded', 'medicated', 'tonic' or 'health', or any other words of the same significance. Regulation 26(7) also stipulates that no label on a food shall claim to be 'enriched, fortified, vitaminized, supplemented or strengthened' or that the food is a source of one or more vitamins or minerals unless a reference quantity of the food contains no less than the amount of the nutrient in question, as specified in Table 2 to the Twelfth Schedule. However, the label on a food to which an essential amino acid or essential fatty acid or both have been added may bear a claim that the food is enriched or supplemented with these nutrients.

Although there are no specific provisions in the current regulations, various claims are already being made on several products. Claims of being low fat, low or no cholesterol, high in fibre, and high in various vitamins, minerals and fatty acids (such as omega-3 fatty acids) are being made on various products in the market. Without any official guidelines or regulations, there is no common understanding among manufacturers and the consumer on how much is 'high' or 'low'. These claims can therefore be misleading to the consumer. An existing regulation also allows industries to claim 'presence of' vitamins and minerals. However, no criteria has been stipulated for making such claims, for example, the presence of minimum amounts of the vitamins and minerals.

To prevent abuse by manufacturers and thereby misleading consumers, the Ministry of Health Malaysia recently introduced a proposal to regulate the use of nutrient content claims, namely claims for 'low' or 'free' for energy, fat, saturated fat, cholesterol, sugars and sodium; and claims for 'source' and 'high' for protein and vitamins and minerals. In order to make these claims, the food must contain minimum or maximum amounts of the specified nutrients, depending on the type of claim.

Two other types of nutrition claims will be permitted in the proposed new regulations. These are comparative claims and nutrient function claims. In the former, as the name suggests, a manufacturer may make comparison on the nutrient content of two or more similar foods and make claims such as 'reduced', 'less than', 'lower' or 'increased', 'more than', and 'higher'. There are, however, various criteria to be met for such claims to be made, for example, the amount of difference between the two foods. As for nutrient function claims, a total of 15 claims have been permitted. During the public comment stage it was observed that there was considerable confusion among the industries between nutrient function claims and health claims. The latter are not allowed in the proposed regulations. Thus, a closed list of nutrient function claims is initially proposed, while allowing the industry to submit requests to add other claims to the list. There are specific conditions to be met before these claims may be made, for example, there should be a minimum amount of a nutrient present.

Health claims are not permitted, even in the proposed new regulations on nutrition labelling and claims. Instead, there are several prohibitions. For example, claims as to the suitability of a food for use in the prevention, alleviation, treatment or cure of a disease, disorder, or particular physiological condition are not permitted.

Nutrition labelling in Brunei Darussalam

There is no mandatory nutrition labelling for general categories of food in Brunei. However, when foods are enriched or fortified with permitted vitamins or minerals, it is required to state the amount of the nutrient present in a specified quantity of the food on a nutrition information panel. Several other groups of foods also require mandatory nutrition labelling, including foods for special dietary uses (for example, diabetic food, low sodium food, gluten-free food, low protein food, carbohydrate-modifed food, low calorie food, infant formula, formulated food) and foods that make nutrition claims. The nutrition information panel should specify the amounts of protein, carbohydrates, fat and the amount of any other nutrients for which a nutrition claim is made.[5]

Nutrition and health claims in Brunei Darussalam

Nutrition claims permitted under the Brunei regulations include representations that suggest or imply that a food has a nutritive property, whether general or specific, and whether expressed affirmatively or negatively.[5] The claims may be made on energy, salt, sodium or potassium, amino acids, fatty acids and a variety of other nutrients, except for vitamins and minerals.

A food label may claim the presence of a vitamin or mineral or imply the presence of a vitamin or mineral, provided the reference quantity for that food contains at least one-sixth of the daily allowance as stipulated in a reference table. These vitamins and minerals may also be presented as

percent of the RDA. Specific provisions are also provided for claim of source of energy and source of protein. For the former, the food must contain at least 1254 kJ in the amount recommended for consumption in a day. Similarly, for protein, the minimum amount is 10 g and comprises at least 20% of the energy content of the food.

Health claims are not permitted in the Brunei regulations.[5] Instead there are specific prohibitions, for example, claims for therapeutic or prophylatic actions; claims that may be interpreted as advice of a medical nature; claims that a food will prevent, alleviate or cure any disease; and words that imply that health or improved condition may be achieved.

Nutrition labelling in Indonesia

Specific requirements for nutrition labelling in foods in Indonesia were spelt out in the section on general labelling food advertisement.[6] More recently, further details were provided in regulation 69 pertaining to food labelling and advertisement.[7] Nutrition labelling is mandatory for certain types of foods, namely baby foods, dietary foods, milk and milk products and other foods as specified by the Director-General. The regulations also apply to foods for which claims are made as to containing specific nutrients, including energy, protein, fat and carbohydrate content, as well as levels of vitamins and minerals. Nutrition labelling is also mandatory for foods that are required to be fortified or enriched with specific nutrients as required by the national legislations. The regulations are also applicable to the voluntary labelling of all other types of foods.

In nutrition labelling, the following are required to be listed: (i) serving size; (ii) number of servings per pack; (iii) energy content per serving; (iv) protein content per serving; (v) carbohydrate content per serving; (vi) fat content per serving; (vii) breakdown of the percentage of energy derived from fat, protein and carbohydrate; (viii) percent of recommended dietary allowances of nutrients; (ix) amounts of other nutrients for which a claim is made; and (x) other nutrients that are considered relevant for the preservation of good nutritional status, for example as required by specific regulations.

Energy values should be given in kJ and kCal per 100 g or per 100 mL. In addition, information can also be given per serving as stated on the label. Data on amounts of protein, carbohydrate and fat are to be given in g per 100 g or per 100 mL of the food. For vitamins and minerals, the amounts are to be given in metric units and also expressed as percent of the RDA. The nutrient content values on the labels should be derived from an analysis of a representative sample of the food.

Nutrition and health claims in Indonesia

The said regulations provide detailed conditions for nutrient content and comparative claims for energy and protein, fat and fatty acid content and enrichment with vitamins and minerals.[7]

No claim for 'source' of energy is permitted unless there is at least 1254 kJ in the suggested amount of food consumed per day. For claims for 'source' of protein, at least 20% by weight of the calorie should be derived from protein and there is at least 10 g of protein in the suggested amount of food consumed per day.

For making claims of 'no calories' or 'low calories', foods are required to meet specific levels of energy per serving. For claims of 'lower calories', the difference in energy content between two similar foods should be at least 25%. Similar claims for fat, saturated fat, cholesterol, sodium and sugar are permitted, provided they comply with specific levels of these nutrients per serving of the food. Conditions for making claims of 'light' and 'very low' are also provided.

Claims of 'enriched', 'fortified', 'extra', 'plus', 'more' and 'added' vitamins, minerals, protein and dietary fibre are permitted provided the foods meet the specified criteria. Simiarly, claims for 'high', 'rich in', 'with', 'provides' and 'good source of' are also permitted.

Ten health claims are also permitted under these regulations, all of which are disease risk reduction claims. Examples of the permitted statements to make the claims are given, as well as conditions that must be met before these claims can be made. The statements generally require supporting statements in addition to the statement associating the nutrient with the disease. The example provided for calcium and osteoporosis is as follows: 'An active lifestyle and a healthy diet with sufficient calcium intake helps teenagers, men and women to maintain healthy bones and reduce the risk of osteoporosis in later life'.

The permitted health claims are as follows: (i) calcium and osteoporosis; (ii) dietary fat and cancer; (iii) dietary saturated fat and cholesterol and coronary heart disease; (iv) fibre-containing grain products, fruits and vegetables and cancer; (v) fruits, vegetables and grain products that contain fibre, particularly soluble fibre and risk of coronary heart disease; (vi) sodium and hypertension; (vii) fruits and vegetables and cancer of the digestive system; (viii) folate and neural tube defect; (ix) sugar, alcohols do not increase dental caries; and (10) soy protein and risk of coronary heart disease.

Conditions for making claims for foods for weight loss, diabetics, 'tonic' foods and foods to 'restore' health are also stipulated in the regulations. It is also prohibited to claim that food is able to prevent, alleviate, treat or cure a disease.

The regulations prohibit the making of the following claims: (i) a balanced and varied diet still requires supplementation with vitamins; (ii) good health and longevity can be maintained only by vitamin supplements; (iii) normal healthy individuals can look younger and live longer with vitamin supplements; (iv) vitamins A and D, the vitamins that are found in fish oil, and vitamin C are able to speed recovery from infections such as influenza or protect a person from infections; (v) increased benefits can be derived from products containing more than 400 units of vitamin D in each daily dose; and (vi) that there is evidence of widespread vitamin deficiency.

Nutrition labelling in the Philippines

The Philippine regulations have prescribed mandatory nutrition labelling for a limited number of foods, namely enriched or fortified foods.[8] Nutrition information may be given in tabulated form and presented on the basis of the food as packaged while another column declares the nutrient amounts after cooking; in relation to average or usual serving in terms of slices, pieces or a specified weight or volume. Nutrients are also to be expressed as percent of the Philippine RDA. The regulation also stipulates the minumum amounts of the nutrients that must be present at any point of inspection. The methods for sampling and analysis (generally by the Association of Official Analytical Chemists (AOAC) methods) are briefly mentioned in the regulations.

If foods are to be exported to the USA they are required to follow the United States Nutrition Labelling and Education Act (USA NLEA) requirements.

Nutrition and health claims in the Philippines

The use of nutrient descriptors such as 'high', 'rich', 'good source', 'low' etc. in nutrition claims are permitted. The required criteria for making these claims are different from those provided in the Codex guidelines.

Health claims are still being developed in the Philippines. Two claims are currently permitted, using the United States Code of Federal Regulations Standard (USCFR). The first of these claims associates calcium with reduced risk to osteoporosis and the second associates diets low in fat with reduced risk of cancer.

In addition, the regulations in the Philippines also clearly prohibit claims that state that: (i) the food is effective in the 'prevention, cure, mitigation or treatment of any disease or symptoms; (ii) a balanced diet cannot supply adequate nutrients; (iii) the food has dietary properties when such properties are of no significant or unproven value in human nutrition; and (iv) natural vitamin is superior to an added or synthetic vitamin.

Nutrition labelling in Singapore

In Singapore, mandatory nutrition labelling is required only for foods enriched or fortified with permitted vitamins, minerals, essential amino acids and fatty acids (regulation 11).[9] It is required to state the amount of the nutrient present in a specified quantity of the food on a nutrition information panel. Mandatory nutrition labelling also applies to special purpose foods, including infant formula (regulation 252). For these foods the amounts of energy, protein, carbohydrate, fat, vitamins and minerals are to be expressed per 100 mL of the formula prepared according to directions. For foods making nutrition claims, they are also required to have a nutrition information panel with energy, carbohydrate and fat (or other nutrients). Although the number of foods requiring mandatory nutritional labelling is limited, various foods in the market already have these labels on their products voluntarily.

In 1997 a voluntary programme to introduce nutrition labelling for a wider variety of general foods was introduced. A *Nutrition Labelling Handbook* was published by the Ministry of Health Singapore that explains in detail the format for a typical nutrition information panel.[10] The serving size of each food is to be provided as well as the listing for a core group of eight nutrients in per serving and as per 100 g (or 100 mL) of the food. The booklet also explains that the acceptable methods of nutrient analysis are direct chemical analysis or indirect analysis using an established nutrient food composition database. Nutrient verification criteria are also given in the booklet.

Nutrient and health claims in Singapore

In the current regulations, several nutrition claims are permitted. A claim for 'source' of energy is permitted provided there is at least 1254 kJ in the suggested amount of food consumed per day. For claims for 'source' of protein, at least 20% by weight of the calorie should be derived from protein and there is at least 10 g of protein in the suggested amount of food consumed per day. A food label may claim the presence of a vitamin or mineral or imply the presence of a vitamin or mineral if the reference quantity for that food contains at least one-sixth of the daily allowance as stipulated in a reference table. The vitamins and minerals present may also be presented as percent of the RDA. For making claims on enrichment or fortification, or that the food is a source of one or more vitamins, the food must contain a specified quantity of the nutrient in a reference quantity.

In the amended regulations a few years later in 1993, provisions for nutrition claims were further elaborated.[9] A nutrition claim is defined as a representation that suggests or implies that a food has a nutritive property, whether general or specific and whether expressed affirmatively or negatively. This includes reference to energy, salt, sodium, potassium, amino acids, carbohydrate, dietary fibre, cholesterol, fats, protein and starch or sugars or any other nutrients. However, these claims do not include a statement of ingredients or a declaration or claim relating to a vitamin or mineral. Claims for vitamins and minerals are separately provided for, as explained in the previous paragraph.

Several years later the Singapore government progressed further in the regulating of nutrition claims. Detailed guidelines on making these claims are given in the handbook published by the Ministry of Health Singapore.[11] The conditions required for making claims such as 'free', 'source', 'low', 'light', 'less' and 'more' for each of the nutrients aforementioned are given in the guidelines. In foods claiming 'high', 'low', 'reduced' etc., it is mandatory to include a nutrition information panel. In addition, the 'Healthier Choice' Label Programme was introduced as part of the overall Nutrition Labelling Programme in 1997. It is a voluntary programme, jointly implemented by the National Heart Association and the Ministry of Health.[12]

In a move towards allowing some health claims, a tentative list of some 30 acceptable claims (nutrient function and enhanced function claims) has been prepared by Singapore. Companies may apply to use these claims on a case-by-case basis. For general food products, permitted claims

include those related to probiotics and prebiotics, vitamins and minerals, lactose, protein and dietary fibre. For infant foods, claims on vitamins and minerals, nucleoproteins and essential fatty acids may be considered. Some claims related to pregnancy are also in the list.

The Singapore regulations also prohibit the making of various misleading statements or claims. These include claims for therapeutic or prophylatic actions, no words implying that a food will prevent, alleviate or cure any disease or condition affecting the human body, improve health or physical condition.

Nutrition labelling in Thailand

In Thailand, nutrition labelling is mandatory only for the following categories of foods:[13,14] (i) foods with nutrition claim, comparative claim or nutrient function claim; (ii) foods with claims of specific benefits or functions to the body or specific ingredients; (iii) foods for specific target groups (e.g. school children, executives, elderly); and (iv) other foods prescribed by the Food and Drug Administration Office. Other foods not mentioned here may have nutrition labelling provided that the stipulated format and rules are observed.

The regulations provide examples of the full format and brief format, which are similar to that of the United States Food and Drug Administration (FDA). In the case of the former, 15 items of nutrients are required to be listed, expressed as per serving of the food and as percent of the Thai RDI. The label (termed as 'Nutrition facts'), also allows for insertion of simple guides on nutrition, for example prescribing the maximum or amounts of several nutrients including fat, cholesterol and sodium. The regulations explains the procedure for prescribing serving size, with a list of the serving size for a variety of foods. Rounding rules for expressing the values are also given.

Nutrition and health claims in Thailand

Three types of nutrition claims are identified in the regulations of Thailand, namely nutrient content claim, comparative claim and nutrient function claims. These claims are similar to those in the Codex guidelines. Examples of nutrient content claim are 'source of calcium', 'high in fibre and low in fat' etc. The regulations prohibit the making of a claim of 'free' or 'low' if the food is naturally 'free' or 'low' in that nutrient. Comparative claims permit the manufacturer from making claims such as 'less than or fewer', 'more than', 'reduced', 'lite' etc. Conditions for nutrient content claim and comparative claim are listed in detail in a table in the regulations.

Examples of nutrient function claims are: (i) 'calcium is an important component of bone and teeth'; and (ii) 'folate is an important component in red cell formation'. In order to make these claims the meeting of various criteria is required; for example, the nutrient should be present in certain quantities. The claim must not have any message that states or leads the consumer to understand that the consumption of such a nutrient (or nutrients) can prevent or cure any disease.

Health claims are not permitted under the current food regulations. The health authorities are examining the draft Codex document on health claims.[14]

Nutrition labelling in Japan

As in all the South-East Asian countries, there is no mandatory nutrition labelling of all foods in Japan. It is compulsory only for foods for special dietary uses and foods with nutrition claims.[15] In such cases it becomes mandatory to label the amount of calorie, protein, fat, carbohydrate (sugars, fibre) and sodium. The amount of vitamins and minerals must be labelled if claims are made on these nutrients. In all cases, the amounts of nutrients must be given as per 100 g or per 100 mL of the food or as per serving. The appropriate units to be used are specified in the regulations. The tolerable range of nutrient levels compared to actual levels are also stipulated, for example: calorie, protein, fat etc., ± 20%; vitamin A, D, calcium, iron, –20% to +50%.

Nutrition and health claims in Japan

Several nutrition claims are allowed in Japan. Claims using the terms 'high', 'rich', 'source of', 'containing a nutrient' etc. are permitted to be used for nutrients such as protein, dietary fibre, Ca, Fe, B vitamins, A, D, E etc. To qualify for making these claims, the amounts of these minerals present must meet levels stipulated in two Tables. One of the tables is for foods claiming 'high', 'rich' whereas a second table is for foods claiming 'source of', 'containing a nutrient', 'fortified'. The levels in the first Table are higher: approximately twice those of the second Table (i.e. the requirements for making the claim of 'high' are more stringent than those for claims of 'source of'). The criteria for making these claims are different from those in the Codex guidelines.[15]

Claims using the term 'non-', 'free', 'low', 'light' etc. for nutrients such as calorie, fat, cholesterol, sugar, sodium are permitted. The criteria for making these claims are contained in two Tables. The first Table is for foods claiming 'non-', 'free', 'zero' whereas the second Table is for foods claiming 'low', 'light'. Levels in the first Table are more stringent (lower) than those in the second table. Again, these levels are different from those recommended in the Codex guidelines.[15]

In Japan, health claims are permitted only for one type of foods, namely foods for specified health use (FOSHU).[16,17] Legalized in 1991, it was meant to be an expansion of the 'health' food market in Japan. It was felt that the term 'functional foods' was not appropriate as it appears in the Pharmaceutical Affairs Law. A special term of FOSHU was thus created. To be considered as FOSHU, each food has to be proven to promote health, on a case-by-case basis, based on epidemiological cohort studies and clinicals trials. Because FOSHU is not a medicine, assessment of effects for this category of foods is not as severe as for drugs. The types of evidence required are similar to those required by the USA health claims.

To date, approximately 200 foods have been approved by Ministry of Health and Welfare as FOSHU. They may be

grouped into eight categories, namely foods: (i) that improve gastrointestinal conditions; (ii) for those with high cholesterol; (iii) that improve gastrointestinal conditions and for those with high cholesterol; (iv) for those with high blood pressure; (v) related to mineral absorption; (vi) for preventing tooth decay; (vii) for those with high blood glucose; and (viii) that make it difficult for blood neutral fat to increase and for fat to cling to the body.

Functional components of FOSHU include: (i) oligosaccharides, lactobacillus, fibre; (ii) soy protein, chitosan; (iii) glycoside from eucommia leaves; (iv) calcium citrate malate (CCM), casein phosphopeptide (CCP); (v) palatinose, maltitol, green tea polyphenols; (vi) indigestible dextrin; and (vii) diacylglycerol.

Nutrition labelling in China

There is no mandatory nutrition labelling of all foods in China. Compulsory nutrition labelling is required only for 'foods for special nutrient'. These are foods in which the natural nutrients and their composition have been modified to satisfy the special nutrient requirements for specific populations.[18] Examples of these foods include foods for infants and young children, nutrient-fortified foods, nutrient adjusted foods (e.g. low-sugar, low-fat etc.). For such foods the caloric value, the amounts of protein, fat and CHO and vitamins and minerals are to be presented as per 100 g or 100 mL and per serving.[18]

Nutrition and health claims in China

Regulations on Health Foods Labelling were issued in 1995.[19] These are foods with a special health function, suitable for consumption of special groups of people. These have the function of regulating the human body but they are not to be used for therapeutic purposes. The regulations have stipulated specific requirements including information required on the label and package inserts of health foods. The information required includes stating the functional component and the approval code number given by the Ministry of Health. The health function claim may be stated but it is not permitted to state or suggest therapeutic effects.

The regulations have also stipulated specific prohibited claims, including (i) claims as to the prevention or treatment of disease; (ii) recovery of one's youthful vigour; (iii) prolongation of life; (iv) anticancer or curing cancer; and (v) secret prescription from generation to generation, nourishing food, food for improvement of health and beauty, food used in imperial palace.

Nutrition labelling in Australia and New Zealand

Nutrition labelling in Australia has been regulated within the Australian Food Standards Code since 1987. The Australian New Zealand Food Authority (ANZFA) is the organization that sets these standards. The current regulations are such that nutrition information is provided voluntarily in food labels, unless a nutrition claim is made.[20] When such a claim is made, a nutrition information panel (NIP) must be provided. This panel displays seven mandatory 'core' nutrients (energy, fat, protein, carbohydrate, sugars, sodium and potassium) as well as the claimed nutrient, and any other nutrients that may be triggered by such a claim. The nutrient declarations are presented in two columns, one expressing nutrient values per serving, and the other per 100 g. The specific format and incorporated components for the panel are regulated.

A detailed review of the nutrition labelling regulations commenced in 1997 as part of the broader review of the Australian Food Standards Code and the development of a new joint Code between Australia and New Zealand. The nutrition labelling review has considered the nutritional information on foods in Australia and New Zealand including content, format and label panels. Consultation on the many aspects of nutrition labelling regulations with consumers, public health professionals, industry representatives and government organizations raised a variety of issues that has culminated in a number of recommended changes and new initiatives.[20]

The Joint Food Standards Code for Australia and New Zealand was approved in November 2000. A number of features on the code relate specifically to labelling and include warning and advisory statements; ingredient lists; date marking; directions for use and storage; nutrition information; legibility requirements; and percentage labelling. One of the key features is the requirement for most packaged foods to bear a NIP. Information must be presented on the amount of fat, saturated fat, protein, energy, carbohydrate, sugar and sodium. Information on these seven nutrients should be provided in terms of both an average serving and on a per 100 g basis. Manufacturers may also express these nutrients in terms of 'percentage of daily intake' (%DI). If a nutrition claim is made, the NIP should then include a declaration of the amount of that nutrient, in addition to the seven nutrients mentioned here.

The Joint Code will replace the existing Australian Food Standards Code and the New Zealand Food Regulations after a 2-year transition period. Over the next 2 years ANZFA will be working with industry, enforcement agencies and consumers to help ensure a smooth transition to the Joint Food Standards Code.[21]

Nutrition and health claims in Australia and New Zealand

A nutrition claim relates to the function, presence or absence of a nutrient in a food. It includes references to, for example, energy or carbohydrate, sugars and starch. The definition of nutrition claim has been expanded in the Joint Code to include biologically active substances. This refers to substances other than traditionally recognized nutrients. This term has been introduced to ensure that substances such as phytoestrogens are included in the nutrition labelling requirements and will trigger a declaration in the NIP. These may be either naturally occurring or added to foods.[21]

Examples of nutrition claims are (i) 'good source of calcium'; (ii) 'high in dietary fibre'; (iii) 'contains less cholesterol'; and (iv) 'reduced salt'. When a nutrition claim is made the NIP must include the seven mandatory nutrients as well as the claimed nutrient.

Current regulations in Australia and New Zealand prohibit the making of health claims, specifically: (i) therapeutic or prophylactic claims about foods; (ii) the mention of any disease or physiological condition; (iii) the word 'health' as part of the name of a food; and (iv) advice of a medical nature.

A review of these current prohibitions is currently under way. It will be determined whether these prohibitions on health claims in Australia and New Zealand should be lifted and if so, under what policy framework should health claims be allowed to exist. The outcome of this review is likely to be known later this year.[20]

Concerns and challenges

One of the major challenges in promulgating requirements for nutrition labelling and claims is to ensure that the consumer understands the label and that it indeed assists them in making an appropriate food choice. It is often said that nutrition labels can help the consumer in making informed choices of food. It is, however, not known how many consumers actually read food labels and look for nutrition information on them. Regulatory agencies should be concerned that the nutrition information indeed helps the consumer rather than be a mere exercise. The concern is whether nutrition labelling is indeed for consumer information rather than for promoting products and for industry benefits.

Whether the consumer understands the nutrition label is related to how much information is on the nutrition label. The concern with some authorities is that too much nutrition information may not benefit the consumer, and indeed may confuse them. The presentation format is also important, as well as whether the values are expressed in per 100 g or per serving. Presenting values in both formats may be desirable, but the industry will argue that the space on the label is limited. There is also the discussion of whether it is useful to present the values as percent daily value or RDA or nutrient reference value (NRV). Some authorities feel that this is of lesser importance and have made this optional on the label.

What nutrients should be on the label and how to select these nutrients are of concern to health authorities. Some countries may want to determine the most important prevailing nutritional problems and would have these nutrients on the label. This approach could result in a large number of nutrients on the label. It should be borne in mind that the nutrition label is only one of the ways of increasing nutrition awareness.

Countries are debating whether nutrition labelling should be made mandatory for all packaged foods or whether it should remain as voluntary. If it is the latter, comparison between different brands of a product becomes difficult because not all brands would have the nutrient declaration. If it is compulsory, the concern is 'ready' for such a move. It is not just the financial aspect that is of concern but also the technical capabilities. Related to this is the concern that small- and medium-scale industries may not be able to comply with the proposed regulations. The concern is also that with the requirement for mandatory nutrition labelling, the cost of the food product may be raised and this rise will have to be borne by the consumer.

Another concern is the laboratory capabilities of the food industry to arrive at the nutrient levels for declaration. Of course the food industry can buy services from private analytical laboratories. But the technical capability of these laboratories should also be considered. Furthermore, it is vital that the regulating agency has the capability of performing the required analyses. Because of the difficulty of fully developing these capabilities, some developing countries are allowing indirect calculations based on nutrient composition databases to arrive at the levels of nutrients to be declared.

With regards to nutrition and health claims, the concern of health authorities is the difficulty in subtantiating such claims. Most authorities are less concerned about nutrition claims but are less reluctant to permit health claims (enhanced function claims and disease risk reduction claims). Authorities have emphasized that it is important to allow health claims to be made in the 'context of total diet'. The concern is that the consumer may have the wrong perception and give overemphasis to a single food or food component. The consumer may expect to cure their ills by taking a particular food.

In contrast, the food industry would want to make nutrition and health claims. Although there is no clear regulations on health claims in countries in the region, several of such claims have appeared on labels and advertisements and are becoming more frequent. If no action is taken against such companies, others would follow suit. If such claims are to be permitted, there has to be an efficient mechanism for processing applications for nutrition and health claims and the monitoring and evaluation of these regulations.

Indeed, one of the biggest challenges is the enforcement of nutrition labelling and claims regulations in the developing countries in the region. The complaint of health authorities is often the lack of resources for enforcement. There can never be 'enough' resources for enforcement. Developing countries just cannot afford to be policing these regulations all the time. There has to be greater self-regulation in the industry.

Conclusion

This review of the status of nutrition labelling in selected countries in the Asia-Pacific region has shown that there is no mandatory nutrition labelling for general foods in almost all the countries in the region. These countries require mandatory nutrition labelling for foods for special dietary use, foods that are enriched or fortified, and foods for which nutrient claims are made. Voluntary nutrition labelling is permitted but should follow the prescribed format. The format and requirements for nutrition labelling differ widely for countries in the region. Some countries, for example, Malaysia, follow the Codex guidelines on nutrition labelling in terms of format, components to be included and mode of expression rather closely. Other countries, such as the Philippines and

Thailand, have drafted nutrition labelling regulations very similar to those of the NLEA of the USA.

Since 1998, countries have introduced or are in the process of introducing voluntary nutrition labelling for a variety of general foods and guidelines for nutrition claims. The Joint Food Standard Code of Australia–New Zealand has recently approved mandatory nutrition labelling of most packaged foods for seven core nutrients. Malaysia has also proposed a new regulation that would require mandatory labelling of four major nutrients in a wide variety of foods. It is noted that the newly introduced requirements in countries in the region are not in the format proposed by Codex. None of the countries, except for Malaysia, has proposed the use of NRV.

It is expected that regulatory activities related to nutrition labelling and nutrition claims in countries in the region will further increase in the near future. These would include greater attention to 'health' foods and health claims. There is also greater demand from consumers for regulations on nutrition labelling as well as clearly stipulated requirements for nutrition and health claims. The manufacturers would also welcome clear guidelines on these matters to facilitate marketing of their products within the requirements of the law.

There are efforts by countries in the region to harmonize the development of nutrition labelling and nutrition claims. It is envisaged that greater harmonization would result in reduced compliance costs for the industry and to help to remove regulatory barriers to trade. The workshop organized by the International Life Sciences Institute (SEA Branch) in April 2001 in Singapore is an effort to work towards harmonization of these activities in South-East Asia. However, in reviewing the various developments in the past year, it would appear that a great deal remains to be done in this effort toward harmonization.

References

1. Malaysia. Food Act 1983 and Food Regulations 1985 (with amendments up to May 2001). Kuala Lumpur: Government of Malaysia, 2001.
2. Nik Shabnam NMS. Proposed requirements for nutrition labelling, Malaysia: Part I. In: Proceedings of the National Seminar on Nutrition Labelling: Regulations and Education, 7–8 August 2000. Kuala Lumpur: Ministry of Health Malaysia, 2000; 73–80.
3. Tee ES. Proposed requirements for nutrition labelling, Malaysia: Part II. In: Proceedings of the National Seminar on Nutrition Labelling: Regulations and Education, 7–8 August 2000. Kuala Lumpur: Ministry of Health Malaysia, 2000; 71–80.
4. FAO/WHO. Food Labelling: Complete Texts (revised 1999), Joint FAO/WHO Food Standards Programme. Rome: FAO/WHO, 1999.
5. Brunei Darussalam. Public Health (Food) Regulations 2000, Supplement to Government Gazette, Part II, no. 48, 19 October 2000. Bandar Seri Begawan: Government of Negara Brunei Darussalam, 2000.
6. Department of Health Indonesia. Compilation of Food Regulations, 3rd edn, Vol. 1. Jakarta: Directorate General of Food and Drug Control, Department of Health, Republic of Indonesia, 1994.
7. Department of Health Indonesia. Government Regulation Number 69 of Year 1999 regarding Food Labelling and Advertisement. Directorate General of Food and Drug Control, Department of Health, Republic of Indonesia, 1999.
8. Department of Health Philippines. Administrative Order no. 88-B: Rules and Regulations Governing the Labelling of Prepackaged Food Products Distributed in the Philippines. XXX: Bureau of Food and Drugs, Ministry of Health, Republic of the Philippines, 1984.
9. Singapore. The Sale of Food Act (Fap. 283). Food Regulations 1990 and amendments S 398 of 1993. Singapore: Government of the Republic of Singapore, 1990.
10. Ministry of Health Singapore. Nutrition Labelling. A Handbook on the Nutrition Information Panel (Singapore). Singapore: Department of Health, Ministry of Health, 1998.
11. Ministry of Health Singapore. Nutrition Labelling. A Handbook on Nutrient Claims (Singapore). Singapore: Department of Health, Ministry of Health, 1999.
12. Tan WL. The Singapore experience in nutrition labelling regulations and their education. In: Proceedings of the National Seminar on Nutrition Labelling: Regulations and Education, 7–8 August 2000. Kuala Lumpur: Ministry of Health Malaysia, 2000; 31–35.
13. Ministry of Public Health Thailand. Notification: Nutrition Labelling, Vol. 182. Bangkok: Ministry of Public Health Thailand, 1998.
14. Kongchuntuk H. Thailand experience in nutrition labelling regulations and education. In: Proceedings of the National Seminar on Nutrition Labelling: Regulations and Education, 7–8 August 2000. Kuala Lumpur: Ministry of Health Malaysia, 2000; 36–45.
15. Ministry of Health, Law and Welfare Japan. The Food Sanitation Law and the Nutrition Improvement Law (translations). Tokyo: Ministry of Health, Labour and Welfare, 2001.
16. Kaji Y. Functional foods in Japan: Foods for specified health uses (FOSHU). In: National Food Technology Seminar 2000, 24–25 October 2000. Kuala Lumpur: Malaysian Agriculture Research and Development Institute, 2000.
17. Japan Health Food and Nutrition Association. Foods for Specified Health Uses (FOSHU). A Guideline. Tokyo: Japan Health Food and Nutrition Association, 2000.
18. State Bureau of Technical Supervision China. Labelling of foods for special nutrients, National Standard of the People's Republic of China GB 13432-92. Beijing: State Bureau of Technical Supervision, People's Republic of China, 1992.
19. Ministry of Health China. Regulation for Health Foods Labelling. Beijing: Ministry of Health, People's Republic of China, 1995.
20. Allen J. The Australian experience in nutrition labelling regulation and education. In: Proceedings of the National Seminar on Nutrition Labelling: Regulations and Education, 7–8 August 2000. Kuala Lumpur: Ministry of Health Malaysia, 2000; 20–35.
21. Curran M. Nutrition labelling experiences in Australia and New Zealand. In: Seminar and Workshop on Nutrition Labelling and Health Claims 5–6 April 2001. Singapore: International Life Sciences Institute (Southeast Asia Branch), 2001.