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NOVEMBER 2008

VOL IX ISSUE VI

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Government of India declares 2008-09 as 'Food Safety and Quality Year'

Unsafe food is a growing concern all over the world. In a bid to ensure safe, quality food, and to create awareness amongst consumers to demand hygienic food, the Government of India has declared the year 2008-09 for 'Food Safety and Quality Year' in India.

The Government aims to implement the plan adopting the following three strategies:

- Coordinated efforts by the ministries and departments such as Ministry of Food Processing Industries (MOFPI), Ministry of Agriculture, Department of Commerce, Ministry of Health, and Department of Consumer Affairs, and the State governments in implementation of the Laws;
- A global focus on the quality of food, to sustain and increase India's food exports thus, making it essential for the Indian food industry to adopt strong practices of food safety and quality as a constant and continuous effort to be competitive; and
- Involving all stakeholders such as governments and its institutions, industry covering the entire food chain, academic and research institutions, consumer bodies and professionals in the field, in implementation of the plan.

The MOFPI has also increased the allocation for this plan from Rs.650 Crore allocated in the 10th five-year plan to Rs.4031 Crore, in the 11th five-year plan as against last five-year plan.

The thrust areas identified by the MOFPI for strategic interventions in the plan are:

- Establishment of Mega Food Parks;
- Creation of integrated cold chain infrastructure at different levels, including farm level primary processing centre-cum-cold chain;
- Establishment of Collection/Aggregation Centres, and Strategic Distribution Centres;
- Capacity building by setting up National Institute of Food Technology Entrepreneurship and Management (NIFTM); and
- Establishment/upgradation of quality control laboratories.

Schemes being implemented by the MOFPI during the year are:

- Scheme for Infrastructure Development;
- Scheme for Quality Assurance, Codex Standards, R&D and Promotional Activities;
- Scheme for Human Resource Development;
- Scheme for Upgradation of Quality of Street Foods;
- Scheme for Strengthening of Institutions;
- Scheme for Technology Upgradation & Establishment

of Food Processing Industries;

Various other initiatives by the Government during the Food Quality and Safety Year 2008-09 include:

- Upgrading hygiene and quality of 10,000 street food vendors across the country;
- Upgradation of 10 ethnic cuisine streets in terms of safety and quality of food, along with support for creating infrastructure such as drainage, water supply, lighting etc.;
- Capacity building of 10,000 food-processing units for HACCP/GMP/ISO 22000;
- Upgradation of 50 food safety laboratories and benchmark them against best practices in the industry;
- 10,000 farmers across the country, about 500 in each state, to be upgraded to achieve certification of Good Agricultural Practices (GAP) and for Organic Food;
- Upgradation of 10 abattoirs, linking them through a cold chain to the retail network;
- Review of Fruit Products Order and Meat & Meat-Food Products Order in consultation with stakeholders;
- Review of Food Safety Standards under the Prevention of Food Adulteration Act;
- Undertaking a Gender Sensitivity Programme by developing standards for gender sensitivity for food processing units;
- Instituting awards for innovative Food Products and Practices;
- Undertaking micro-level study to identify steps needed to eliminate wastage in various crops;
- Undertaking state-level studies to estimate the level of pesticides, other residues in food products and the nutritional content of diet;
- Preparation of Action Plan for a Rapid Response System for responding to food safety issues;
- Developing standards for the street food sector;
- Identifying Action Points to take India's local standards to standards prescribed under Codex Alimentarius;
- Publishing brochure on food safety programmes in school curriculum;
- Introducing food safety programmes in school curriculum;
- Year long programme of short duration workshops on food safety and quality;
- Issuing a postage stamp to mark Food Safety and Quality Year 2008-09.

Reference:

Ministry of Food Processing and Industries, Govt. of India



Principles and Practices of Food Safety Management

Food safety and quality assurance is an ongoing process and is related to prevention of food borne hazards at the point of consumption. Food safety hazards can occur in the food chain at any stage; therefore, adequate control throughout the supply chain is essential. Food safety is a joint responsibility of all players within the food chain, including, producers, manufacturers, transport and storage operators, sub contractors, retail and food service outlets and service providers. In recent years, there has been a spate of food borne diseases all around the world, which necessitated the need for establishing a food safety management system by all types of players within the food chain.

The Global Food Safety Initiative (GFSI) was launched in 2000 by the Global Food Business Forum (CIES), a network of 350 retailers and food suppliers in 150 countries representing 65 percent of global food retail revenue, as a means to respond to the proliferation of diverse standards. GFSI has implemented and has been maintaining a scheme to benchmark private food safety standards. The GFSI benchmark model serves as an “equivalency framework” by outlining key elements that a food safety standard should contain:

- A Quality Management System (QMS) applied to food safety (e.g. based on the ISO 9000 standards);
- Implementation of prerequisite food safety programmes such as Good Agricultural Practices (GAPs), Good Manufacturing Practices (GMPs) and Good Hygiene Practices (GHPs);
- A HACCP-based system in accordance with, or equivalent, the Codex standards.

Overview of the major international food safety management systems and programmes:

Standard	Geographical Range	Operations	Scope	Acceptance
ISO 22000	International	All operators	QMS and HACCP	In progress
BRC Global Food*	UK and Scandinavia	Only manufacturing (food industries)	QMS, HACCP and GMP	Majority of UK and Scandinavian retailers
IFS*	Germany and France	Only manufacturing (food industries)	QMS, HACCP, GMP	Majority of French and German retailers
SQF*	USA and Australia	Primary producers	QMS only (SQF 1000) Food industries (SQF 2000)	Numerous US and Australian retailers
EUREPGAP*	EU and Switzerland	Primary producers (GAP)	GAP and principles of HACCP	Numerous European retailers
Dutch HACCP	The Netherlands	All operators (primary producers not mentioned)	QMS and HACCP	Dutch retailers

* Benchmarked by GFSI

The standards differ significantly with regard to geographic range, intended operators, scope of provision, and final market acceptance. Each standard has its own specific body of requirements. The private food safety management programmes are intended to be used in business-to-business relationships and hence, not directly visible for the consumers in the form of product label.

Hazard Analysis and Critical Control Point (HACCP)

The system of HACCP is a science-based, systematic tool for identifying and evaluating hazards that are significant for food safety and for establishing systems of control and measures to ensure food safety. HACCP can be applied throughout the food chain. However, it is more relevant for food manufacturing industries. HACCP, presently, has become a requirement for international food trade. The HACCP system consists of seven principles:

1. Conducting a hazard analysis;
 - Listing and analyzing all potential hazards at each step of production and assessing its risk to food safety;
 - Identifying measures of control for each relevant hazard.
2. Determining Critical Control Points (CCPs) where control is applied to address critical hazards;
3. Establishing Critical Limits (CLs) for each CCP;
4. Establishing a system to monitor and manage control of CCPs relative to their CLs;
5. Defining and implementing corrective actions for bringing CCPs under control, when not, and ensuring CCPs are under control.
6. Establishing procedures to verify and confirm effective working of the HACCP system;
7. Establishing appropriate documentation for all procedures and records.

ISO Standards for Food Safety Management

The International Organization for Standardization (ISO) is a worldwide body that develops different kinds of standards for the industries. The most prominent and important ISO standards for the food industry are:

- ISO 9000 - Quality Management System (QMS)
- ISO 14000 - Environmental Management System
- ISO 22000 - Food Safety Management System

ISO 9000:2000 lays down a set of standardized good management practices for quality management systems. It defines what requirements quality systems must meet but does not dictate how they should be met within a specific organization.

ISO 22000, designed around the HACCP method and Codex Alimentarius Commission (CAC), allows all types of organization within the food chain to implement a food safety management system, which ranges from feed producers, primary producers, food manufacturers, transport and storage operators and subcontractors to retail and food service outlets – together with related organizations such as producers of equipment, packaging material, cleaning agents, additives and ingredients.

ISO 22000

Scope and objectives

- Establishment of a single internationally recognized standard for food safety;
- Applies to all food operators including primary producers
- Implementation of general food safety management;
- System based on management responsibility and resource management;
- Implementation of prerequisite

Provisions

- programmes (GAPs, PMPs, GHPs);
- Implementation of HACCP and traceability system;
- Validation, verification and improvement procedures.

Private Industry and Retailer Standards

The International Food Standard (IFS)

IFS was set up in 2002 by the German retail association, HDE, and was joined by the French retail association, FCD, in 2003. It is a food safety and quality management protocol based on HACCP and designed for producers of all kinds of food products.

- | | |
|----------------------|---|
| Scope and objectives | <ul style="list-style-type: none"> • Applies to food manufacturers and processors only; • Aimed at suppliers of private label food products |
| Provisions | <ul style="list-style-type: none"> • Management of the quality system; • Implementation of HACCP system based on Codex Principles; • General GMPs. |
| Market penetration | <ul style="list-style-type: none"> • Almost all French and German retailers request IFS certification, as do some retailers from Austria, Switzerland, Italy and Poland. |

Safe Quality Food (SQF) Standard

SQF deals with comprehensive food safety management. However, in comparison to other standards, it does not include good practices or HACCP, but only specifies requirements for quality management systems. SQF is designed for all types of food products and for all types of suppliers.

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|----------------------|---|
| Scope and objectives | <ul style="list-style-type: none"> • Complete food safety management; • SQF 1000: Primary producers; • SQF 2000: Food industry. |
| Provisions | <ul style="list-style-type: none"> • Mainly deals with quality management systems; • GAPs as a prerequisite programme for SQF 1000 (no specifications); • GMPs as a prerequisite programme for SQF 2000 (no specifications); • Establishment of food safety plans based on HACCP (no specifications). |
| Market penetration | <ul style="list-style-type: none"> • Most American retailers and global retailers request or support SQF certification. |

BRC Global Standard – Food

The standard is a private food safety standard elaborated and adopted by the British Retail Consortium (BRC), a trade association representing the whole range of retailers in UK.

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|----------------------|---|
| Scope and objectives | <ul style="list-style-type: none"> • Food safety and quality management system for food manufacturers. |
| Provisions | <ul style="list-style-type: none"> • Adoption and implementation of HACCP; • Implementation of GMPs and GHPs; • Control of factory environmental standards, products, processes and personnel. |
| Market penetration | <ul style="list-style-type: none"> • All major UK and Scandinavian retailers only source food from BRC-certified suppliers. BRC is increasingly viewed as a benchmark for best practices in food manufacturing. |

EUREPGAP

EUREPGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the world. EUREPGAP is a pre-farm-gate-standard and is a business-to-business label; therefore, not directly visible for consumers. It incorporates Integrated Pest Management (IPM) and Integrated Crop Management (ICM) practices into the framework of commercial agricultural production.

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|----------------------|--|
| Scope and objectives | <ul style="list-style-type: none"> • Promotion of good and environmentally sound agricultural practices; • Restoration of consumer confidence in food safety; • Promotion of sound animal welfare and worker health programmes. |
| Provisions | <ul style="list-style-type: none"> • Implementation of GAPs and promotion of IPM and ICM • Quality management issues such as traceability and record-keeping; • Risk assessment according to HACCP principles. |
| Market penetration | <ul style="list-style-type: none"> • The EUREPGAP standard on fruits and vegetables has become the most commonly used and established standard. |

Reference:

UNCTAD

Requirements for Exporting Sea Food to the EU

The EU is the largest importer of fishery products in the world. The EU imports of fishery products amounted to ^a 28 billion in terms of value, and 8.5 million tons in terms of volume, during 2006. The imports of fishery products in the EU have been showing an increasing trend in recent years. Total imports increased by 23 percent in value and 15 percent in volume in 2006 over the previous year. A significant quantity of fishery products imported by EU comes from the developing countries. During 2006, around 27 percent of total fishery products imported by EU were from developing countries.

General Requirements for Imports of Fishery Products in EU

The European Commission's Directorate General for Health and Consumer Protection (DG SANCO) is responsible for food safety in the EU. The import conditions takes into account the protection of consumer health as well as territory of the Union from introduction of animal or plant disease.

The EU bases its systems on government-to-government assurances. Imports of fishery products into the EU are subject to official certification by the Competent Authority (CA) in the exporting non-EU country for export to the European Commission (EC).

The CA in the exporting countries is responsible for carrying out the inspections and certifications and ensure that health rules on production and the health safety standards laid down by the EU legislation are correctly applied and checked.

As a part of market access conditions, the EU Food and Veterinary Office (FVO) assesses the equivalency of an exporting country's seafood safety regime and determine the conditions required to be met. FVO undertakes inspection missions in all exporting countries and acts as the basis for establishing confidence between the EC and the CA of the exporting country, on basis of which, the EC issues approvals.

Seafood can be exported to the EU only from:

- Approved countries;
- Approved vessels and establishments (e.g. processing plants, freezer or factory vessels and cold stores);
- Approved aquaculture establishments and areas.

Criteria for drawing up of list of approved countries by EC include:

- Recognition of the equivalence of the relevant CA of the third country to the national authorities of the Member States.
- Health status of the exporting country as regards animal diseases, which are transmissible through animal products.
- Submission by the country concerned of an annual residue-monitoring plan for the products concerned.

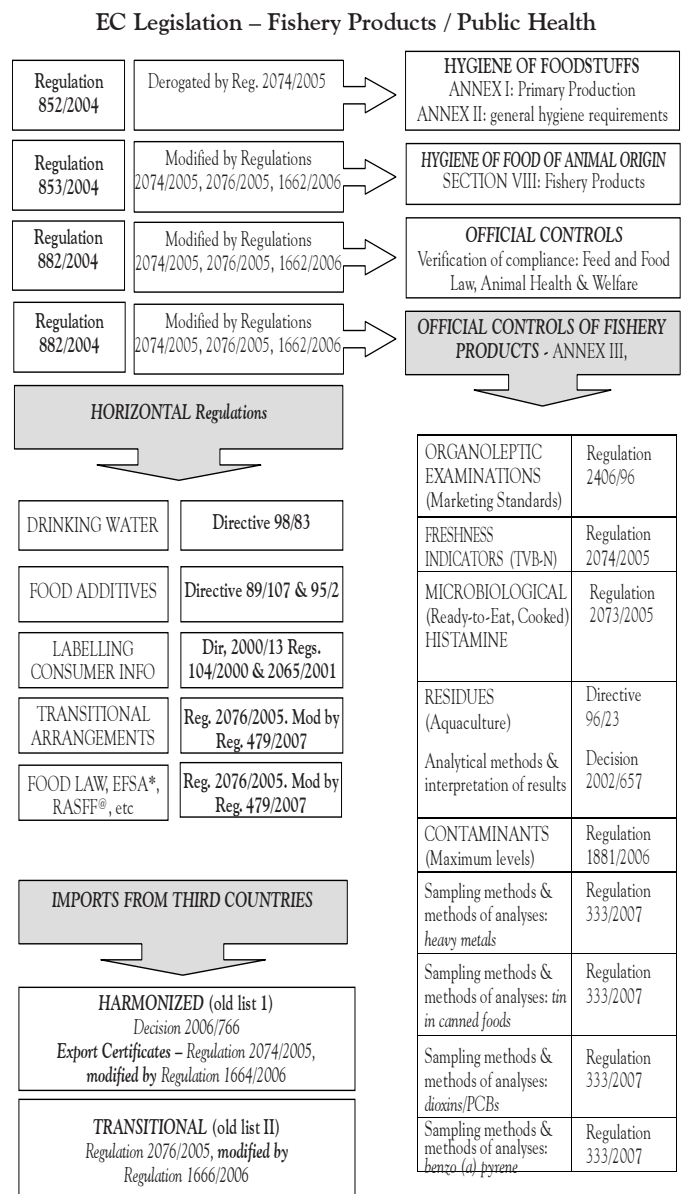
CA of the exporting non-EU country is required to assure compliance to three types of obligations:

- *Obligations of resources:* i.e. Instruments of production, conditions of handling/processing, HACCP and pre-requisite programmes, traceability.

- *Obligations of results:* Safety levels of the products (i.e. Histamine, contaminants, micro levels).
- *Obligations of control:* i.e. Regulatory verification, effectively implemented by the CA, strict control of certification of products.

Besides the official guarantees and the shipment documents, a EU Health Certificate in the language of the Border Inspection Post (BIP) of entry into the EU is also necessary. The certificate is issued only for products processed in establishments listed on the EU Approved Establishment list and should provide an accurate description of the identity of the approved processor of the goods, the type of fish being shipped, the quantity of product being shipped and, the final destination of the goods.

Other regulatory, certification and labelling requirements are as per the flowchart below:



Source: UNCTAD

India currently, has 230 EU approved units for processing, storing and handling of fishery products, which have been exporting seafood to EU.

State-wise Summary of the List of Approved Units for Seafood Exports to EU

Maritime State	PP/	PPa	A	Total
Gujarat	3	19	-	22
Maharashtra	4	24	0	28
Karnataka	6	1	0	7
Kerala	49	16	23	88
Tamil Nadu	4	21	2	27
Andhra Pradesh	-	37	1	38
Orissa	-	7	1	8
West Bengal	-	9	-	9
Goa	-	3	-	3
Total	66	137	27	230

PP: Processing Plant; PPa: Processing Plant engaged in processing fully or partially farm raised materials; A: Exclusive Cold Storage facility for F&FP

Source: MPEDA

Reference:

- International Trade Centre, UNCTAD/WTO
- CBI, The Netherlands

Labelling Requirements of Prepackaged Food

Food labeling is the primary means of communication between the producers and sellers of food and the purchasers and consumers. The Codex Alimentarius Commission (CAC) is an intergovernmental body established by the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO), with the purpose of protecting the health of consumers and ensuring fair practices in the food trade.

CAC has underlined guidelines/standards for labelling requirements of prepackaged foods. Standards apply to the labelling of all prepackaged foods to be offered as such to the consumers or for catering purposes.

Mandatory Labelling

Following information shall appear on the label of prepackaged foods as applicable to the food being labelled, except to the extent otherwise expressly provided in an individual Codex standard:

Name

- The name shall indicate the true nature of the food and normally be specific and not generic. In the absence of a name established by Codex standard or national legislations, common or usual name existing by common usage as an appropriate descriptive term, which is not misleading or confusing to the consumer shall be used;
- A •gcoined•h, •gfanciful•h, •gbrand•h name, or •gtrade mark•h may be used provided it accompanies one of the names as mentioned above;
- In addition, information on the true nature and physical condition of the food including, but not limited to, the type of packing medium, style, and the condition or type of treatment it has undergone; for example: dried, concentrated, reconstituted, smoked, should also be provided in conjunction with the name.

List of Ingredients

- Except for single ingredient foods, a list of ingredients shall be declared on the label headed or preceded by an appropriate title, which consists of or includes the term •ingredient•;
- All ingredients shall be listed in descending order of ingoing weight (m/m) at the time of the manufacture of the food. Where an ingredient itself is the product of two or more ingredients, such a compound ingredient may be declared, as such, in the list of ingredients accompanied by a list, in brackets, of its ingredients in descending order of proportion (m/m)¹.
- The following foods and ingredients are known to cause hypersensitivity and shall always be declared:
 - o Cereals containing gluten; i.e., wheat, rye, barley, oats, spelt or their hybridized strains and products of these;
 - o Crustacea and their products;
 - o Eggs and egg products;
 - o Fish and fish products;
 - o Peanuts, soybeans and their products;
 - o Milk and milk products (lactose included);
 - o Tree nuts and nut products; and
 - o Sulphite in concentrations of 10 mg/kg or more.
- Any food or food ingredients obtained through biotechnology of an allergen transferred from any of the products listed above shall be declared;

- Added water shall be declared in the list of ingredients except when the water forms part of an ingredient such as brine, syrup or broth used in a compound food and declared as such in the list of ingredients;
- Except for those ingredients listed above the following class names may be used:

Name of classes	Class names
Refined oils other than olive	'Oil' together with either the term 'vegetable' or 'animal', qualified by the term 'hydrogenated' or 'partially-hydrogenated', as appropriate
Refined fats	'Fat' together with either, the term 'vegetable' or 'animal', as appropriate
Starches, other than chemically modified starches	'Starch'
All species of fish where the fish constitutes an ingredient of another food and provided that the labelling and presentation of such food does not refer to a specific species of fish	'Fish'
All types of poultrymeat where such meat constitutes an ingredient of another food and provided that the labelling and presentation of such a food does not refer to a specific type of poultrymeat	'Poultrymeat'
All types of cheese where the cheese or mixture of cheeses constitute an ingredient of another food and provided that the labelling and presentation of such food does not refer to a specific type of cheese	'Cheese'
All spices and spice extracts not exceeding 2% by weight either singly or in combination in the food	'Spice', 'spices', or 'mixed spice', as appropriate
All herbs or parts of herbs not exceeding 2% by weight either singly or in combination in the food	'Herbs' or 'mixed herbs', as appropriate
All types of gum preparations used in the manufacture of gum base for chewing gum	'Gum base'
All types of sucrose	'Sugar'
Anhydrous dextrose and dextrose monohydrate	'Dextrose' or 'glucose'
All types of caseinates	'Caseinates'

Milk Protein Milk products containing a minimum of 50% of milk protein (m/m) in dry matter *

Press, expeller or refined cocoa butter 'Cocoa butter'

All crystallized fruit not exceeding 10% of the weight of the food 'Crystallized fruit'

¹ An abbreviation for "by mass," used in chemistry and pharmacology to describe the concentration of a substance in a mixture or solution.

• For food additives falling in the respective classes and appearing in lists of food additives permitted for use in foods generally, following class titles shall be used together with the specific name or recognized numerical identification.

- Acidity Regulator
- Acids
- Anticaking Agent
- Antifoaming Agent
- Antioxidant
- Bulking Agent
- Colour
- Colour Retention Agent
- Emulsifier
- Emulsifying Salt
- Firming Agent
- Flour Treatment Agent
- Flavour(s) and Flavouring(s)
- Flavour Enhancer
- Foaming Agent
- Gelling Agent
- Glazing Agent
- Humectant
- Preservative
- Propellant
- Raising Agent
- Stabilizer
- Sweetener
- Thickener
- Modified Starch (es)

The expression •gflavours•h may be qualified by •gnatural•h, •gnature identical•h, •gartificial•h or a combination of these words as appropriate.

- A food additive carried over into a food in a significant quantity or in an amount sufficient to perform a technological function in that food should be mentioned.

Net contents and drained weight

The net contents shall be declared in the metric system:

- For liquid foods, by volume;
- For solid foods, by weight;
- For semi-solid or viscous foods, either by weight or volume

In addition, a food packed in a liquid medium shall carry a declaration in the metric system of the drained weight of the food.

Other mandatory labelling includes:

- Name address of the manufacturer, packer, distributor, importer, exporter or vendor of the food;
- Country of origin - a food undergoes processing in a second country which changes its nature, the country in which the processing is performed shall be considered to be the country of origin for the purposes of labelling;
- Lot identification;
- Date marking and storage instructions;
- Instructions for use;

Additional Mandatory Requirements

Quantitative Labelling of Ingredients

Where the labelling of a food places special emphasis on the presence of one or more valuable and/or characterising ingredients, or where the description of the food has the same effect or where the labelling of a food places special emphasis on the low content of one or more ingredients, the percentage of the ingredient (m/m) at the time of manufacture and in the final product shall be declared.

Irradiated Foods

The label of a food, treated with ionizing radiation shall carry a written statement indicating it in close proximity to the name of the food. The use of the international food irradiation symbol is optional, but when used, shall be in close proximity to the name of the food. An irradiated product used as an ingredient should also be declared in the label.

Exemptions

With the exception of spices and herbs, small units, where the largest surface area is less than 10 cm², may be exempted from the requirements of labelling.

Presentation of Mandatory Information

The name and net contents of the food shall appear in a prominent position and in the same field of vision. Statements covering mandatory information shall be clear, prominent, indelible and readily legible by the consumer under normal conditions of purchase and use.

If the language on the original label is not acceptable, to the consumer a supplementary label containing the mandatory information in the required language may be used instead of relabelling.

Reference:

Codex Alimentarius - FAO

Nutrition Labelling of Food

The Codex Alimentarius Commission guidelines outline the nutrition labelling requirements of all foods. *Nutrition labelling* is a description intended to inform the consumer of nutritional properties of a food.

Nutrition labelling consists of two components:

- (a) Nutrient declaration;
- (b) Supplementary nutrition information.

Nutrition declaration means a standardized statement or listing of the nutrient content of a food. Any representation, which states, suggests or implies that a food has particular nutritional properties, is known as *Nutrition claim*. However, the following do not constitute nutrition claims:

- (a) The mention of substances in the list of ingredients;
- (b) The mention of nutrients as a mandatory part of nutrition labelling;
- (c) Quantitative or qualitative declaration of certain nutrients or ingredients on the label if required by national legislation.

Nutrient means any substance normally consumed as a constituent of food:

- a. which provides energy; or
- b. which is needed for growth, development and maintenance of life; or
- c. which, if not taken may cause characteristic bio-chemical or physiological changes to occur.

Nutrient Declaration

Nutrient declaration is mandatory for foods for which nutrient claims are made. Nutrient declaration is voluntary for all other foods. Where nutrient is declared, the following are mandatory:

- Energy, value;
- Amounts of protein;
- Available carbohydrate (i.e., carbohydrate excluding dietary fibre);
- Fat;
- Amount of any other nutrient for which a nutrition or health claim is made;
- Amount of any other nutrient considered to be relevant for maintaining a good nutritional status, as required by national legislation or national dietary guidelines;

Besides, where a claim is made regarding the amount and/or the type of carbohydrate, the amount of total sugars should be listed, and the amounts of starch and/or other carbohydrate constituents should also be listed. Where a claim is made regarding the dietary fibre content, the amount of dietary fibre should be declared. Where a claim is made regarding the amount and/or type of fatty acids or the amount of cholesterol, the amounts of saturated fatty acids, mono-unsaturated fatty acids and poly-unsaturated fatty acids and cholesterol should be declared. Trans fatty acid may be declared as per the requirement of the national legislations.

In addition to the mandatory declarations, vitamins and minerals may be listed in accordance with the following criteria:

- Only vitamins and minerals for which recommended intakes have been established and/or which are of nutritional importance in the country concerned should be declared;

- Vitamins and minerals which are present in amounts less than 5% of the Nutrient Reference Value, or of the officially recognized guidelines of the national authority having jurisdiction, per 100 g or 100 ml or per serving, as quantified on the label should not be declared.

Calculation of Nutrients

Calculation of energy:

The amount of energy to be listed is calculated by using the following conversion factors:

- Carbohydrates 4 kcal/g - 17 kJ
- Protein 4 kcal/g - 17 kJ
- Fat 9 kcal/g - 37 kJ
- Alcohol (Ethanol) 7 kcal/g - 29 kJ
- Organic acid 3 kcal/g - 13 kJ

Calculation of protein

Unless a different factor is given in a Codex standard or in the Codex method of analysis for that food, the amount of protein to be listed is calculated using the following formula:

$$\text{Protein} = \text{Total Kjeldahl Nitrogen} \times 6.25$$

Presentation

The declaration of nutrient content should be numerical. Energy value should be expressed in *kJ* and *kcal* per 100 g, or per 100 ml, or per package, if the package contains only a single portion. Amounts of protein, carbohydrate and fat in the food should be expressed in g per 100 g, or per 100 ml, or per package, if the package contains only a single portion. Further, information on protein may also be expressed as percentages of the Nutrient Reference Value. Vitamins and minerals should be expressed in metric units and/or as a percentage of the Nutrient Reference Value per 100 g, or per 100 ml, or per package, if the package contains only a single portion. In addition, information may be provided per serving as quantified on the label or per portion, provided that the number of portions contained in the package is stated.

Following Nutrient Reference Values is used for labelling purposes in the interests of international standardization and harmonization:

Protein	(g)	50	Selenium (value to be established)		
Vitamin A	(fÊg)	800	Vitamin B ₁₂	(fÊg)	1
Vitamin C	(mg)	60	Calcium	(mg)	800
Vitamin D	(fÊg)	5 ¹	Magnesium	(mg)	300
Thiamin	(mg)	1.4	Iron	(mg)	14
Riboflavin	(mg)	1.6	Zinc	(mg)	15
Niacin	(mg)	18 ¹	Iodine	(fÊg)	150 ¹
Vitamin B ₆	(mg)	2	Copper (value to be established)		
Folic Acid	(fÊg)	200			

In countries where serving sizes are normally used, the information may be given per serving only as quantified on the label or per portion, provided that the number of portions contained in the package is stated.

Declaration of type of carbohydrate and total carbohydrate content should be presented in the following format:

'Carbohydrate ... g, of which sugars ... g'.

This may be followed by the following: 'x' h ...g

where 'g' h represents the specific name of any other carbohydrate constituent.

Declaration of amount/type of fatty acids and cholesterol should be presented in the following format:

	Total Fat	...	g
of which	saturated fatty acids	...	g
	trans fatty acids	...	g
	mono-unsaturated fatty acids	...	g
	poly-unsaturated fatty acids	...	g
	Cholesterol	...	mg

Tolerances and Compliance

Tolerance limits is set in relation to public health concerns, shelf-life, accuracy of analysis, processing variability and inherent lability and variability of the nutrient in the product, and, according to whether the nutrient has been added or is naturally occurring in the product. Values used in nutrient declaration should be weighted average values derived from data specifically obtained from analyses of products, which are representative of the product being labeled.

Supplementary Nutrient Information

Supplementary nutrition information is intended to increase the consumer's understanding of the nutritional value of their food and to

assist in interpreting the nutrient declaration. The use of supplementary nutrition information on food labels is optional and given, in addition to the nutrient declaration. For these, food group symbols or other pictorial or colour presentations is used without the nutrient declaration.

The CAC guidelines also outline that supplementary nutrition information on labels should be accompanied by consumer education programmes to increase consumer understanding and use of the information.

Periodic Review

The CAC guidelines mandate to review the nutrition labelling periodically in order to maintain the list of nutrients, to be included in composition information, up-to-date, and in accordance with public health facts about nutrition.

Reference:

➤ Codex Alimentarius - FAO

¹ Nutrient Reference Values for Vitamin D, Niacin and Iodine may not be applicable for countries where national nutrition policies or local conditions provide sufficient allowance to ensure that individual requirements are satisfied.

Food Safety Regulations in India: Institutional and Legal Framework

In India, there are different agencies that are dealing with the safety of food products. Following are the key Indian regulatory framework, presently dealing with the food safety issues:

Prevention of Food Adulteration (PFA) Act, 1954

PFA is the most important regulation ensuring food safety and quality in India. The objective of this Act is to formulate and monitor the standards of quality and purity. The provisions of the Act are mandatory and contravention of the rules can theoretically lead to both fine and imprisonment.

The Central Committee of Food Safety (CCFS) and Directorate General of Health Services, Ministry of Health and Family Welfare, Government of India, are the primary policy making bodies that advise Central and State Governments regarding the administration of the Act and development of standards relating to the Act.

The PFA lays emphasis on the prevention of adulteration of foods. However, it is not comprehensive enough to deal with the contamination of food through the animal feed and the food chain.

Export Quality Control Inspection Act, 1963

Export Inspection Council (EIC), set up by the Ministry of Commerce and Industry, Government of India is responsible for implementation of this Act, under which the exportable commodities are notified for compulsory pre-shipment inspection. The conditions under this Act are generally replica of the food safety standards of EU and United States for the same products.

Meat Products Control Order, 1973

This order deals with quality control and marketing of meat-food products and falls under the Ministry of Agriculture, Government of India. Agriculture Marketing Advisor to the Government of India is the licensing authority under this order.

Milk and Milk Products Order, 1992

The Order was promulgated by the Government of India under the provisions of Essential Commodities Act, 1955, consequent to de-licencing of the dairy sector in 1991. The main objective of the Order is to maintain and increase in supply of liquid milk of desired quality in the interests of the general public and also for regulating the production, processing and distribution of milk and milk products. Post amendment in 2002, the Order now also cover sanitary, hygiene, quality and food safety requirements of dairy products.

Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, 1967

The Order is a quality control order to ensure that the solvent extracted oils does not reach the consumers for consumption before the same are refined and conformed to the quality standards specified in the Order for the purpose. Standards for the solvent (hexane), which is to be used for extraction of oil from the oil-bearing materials, have also been specified so as to eliminate possible contamination of oil from the solvent used.

Salient Features:

- Governs the manufacture, quality and movement of solvent

extracted oils, de-oiled meal and edible flour;

- Consumer protection through quality assurance of solvent extracted oils, de-oiled meal and edible flour;
- Eliminates the possibility of diversion of the oils for uses not intended;
- Prohibits by, offer to buy, use or stock for use, any solvent not conforming to the quality standards for extraction of vegetable oils; and
- Specifies particulars to be declared on the label affixed to the container.

Other Government regulations include Edible Oils Packaging (Regulation) Order, 1998, Vegetable Oil Products (Regulation) Order, 1998, and Compulsory Compliance Legislation and Food Products Order (1973)

Voluntary Standards

Bureau of Indian Standards (BIS)

BIS develops standards for most processed foods that are domestically traded in India. BIS standards cover raw material permitted and their quality parameters, hygiene conditions under which the products must be manufactured and meet the packaging and labelling requirements. Producers who comply with BIS standards can obtain the ISI mark.

Directorate of Marketing & Inspection (DMI)

DMI enforces the Agriculture Produce Grading and Marketing Act, 1937. Under this Act, grade standards are prescribed for agriculture and allied commodities. Grading is voluntary and manufacturers who comply with the standards laid down by DMI are allowed to use *Agmark* label on their products.

Ministry of Environment and Forest

Ministry of Environment and Forest has introduced 'Ecomark' criteria for certain food items such as edible oil, tea, coffee, baby foods and preserved food and vegetables. The criteria are in accordance with PFA. However, 'Ecomark' is voluntary standard and not a mandatory one.

Food Testing Laboratories

There are four Central Food Laboratories established under PFA Act, which serve as appellate laboratories, where food samples collected by food inspectors from state and local levels are tested. Two of the four laboratories, the Food Research and Standardisation Laboratory, Ghaziabad, and Central Food Laboratory, Kolkata, are under the administrative control of the Directorate General of Health Services and the other two, Central Food Laboratory (CFL), Pune, and Central Food Technological Research Institute (CFTRI), Mysore, are under the administrative control of Government of Maharashtra and Council of Scientific and Industrial Research (CSIR). In addition, there are 84 state food laboratories and several private laboratories. Some laboratories are also under EIC and BIS.

Integrated Food Law

An Integrated Food Law being considered by the Government of India combines over 16 different food laws into a single law. The objective and modus operandi of the law is as under:

INTEGRATED FOOD LAW "THE FOOD ACT"

OBJECTIVES

"To provide safe and wholesome food to the consumers and to create an enabling environment for value addition to primary agricultural produce, to bring innovation and creativity, and rapid development of food processing industries in an integrated manner, ensuring a high degree of objectivity and transparency."

FOOD REGULATORY AUTHORITY OF INDIA (FRAI)

- To coordinate and supervise implementation of The Food Act.
- To formulate rules & procedures and to amend add or delete any of the same as may be required from time to time in fulfillment of the objectives of The Food Act.
- To recommend to the Government on any related issues.

COUNCIL OF FOOD STANDARDS (CFS)

- To lay standards for food and to amend, add or delete any of the same as may be required from time to time.
- To make recommendations to the FRAI on any technical issues.

FOOD SAFETY ADMINISTRATION (FSA)

- To implement safety of food for the consumer, taking food samples, getting the same analyzed by an accredited food laboratory.
- To pursue recommendations of the Review Panels and initiate compounding, recall or prosecution proceedings.

Source: Ministry of Food Processing and Industry, Govt. of India

Export Inspection Council (EIC)

The Export Inspection Council (EIC) was set up by the Government of India in order to ensure sound development of export trade of India through Quality Control and Inspection and for matters connected thereof.

EIC is an advisory body to Government of India, which is empowered under the EIC Act to:

- Notify commodities, which will be subject to quality control and/or inspection prior to export;
- Establish standards of quality for such notified commodities; and
- Specify the type of quality control and / or inspection to be applied to such commodities.

Besides its advisory role, the EIC also exercises technical and administrative control over the five Export Inspection Agencies (EIAs), one each at Chennai, Delhi, Kochi, Kolkata and Mumbai established for this purpose.

EIC, either directly or through EIAs renders services in the following areas:

- Certification of quality of export commodities through installation of quality assurance systems (In-process Quality Control and Self-Certification) in the exporting units as well as consignment wise inspection;
- Certification of quality of food items for export through installation of Food safety Management System in the food processing units;
- Issue of Certificates of origin to exporters under various preferential tariff schemes for export products.

Presently, EIC's certification is recognised in the following areas:

1. Basmati Rice by European Commission (for certificates of authenticity).
2. Black Pepper by United States Food & Drug Administration (USFDA) (as per which, any consignment of black pepper from India, not accompanied by EIA's certificate, is detained on arrival in USA)
3. Fish and Fishery Products by European Commission (as per which, the processing units are specifically approved for export to European Union and the names of approved units sent to the European Commission for formal notification, after which they can export to EU countries)
4. Fish and Fishery Products by Australian Quarantine & Inspection Service (AQIS) Australia's official import control agency (as per which, seafood consignments from India accompanied by EIC's certificates will undergo only random verification sampling not exceeding 5% of the consignments, and health certificates issued by EIC will be accepted)

Aquaculture Authority

The Authority has been set up under the Environment (Protection) Act, 1986, to deal with relevant environmental issues pertaining to coastal areas with respect to shrimp aquaculture farming.

Reference:

- Research and Information System for the Non-Aligned and Other Developing Countries (RIS)
- Department of Animal Husbandry, Dairying & Fisheries, Ministry of Agriculture, Government of India
- Ministry of Consumer Affairs, Food and Public Distribution, Government of India

NEWS FOCUS

New rules on pesticide residues to strengthen food safety in the European Union

The new rule applies the principle that food produced or imported in one member state must be safe for consumers in all. With the previous regime, different Maximum Residue Levels (MRLs) could apply to the same pesticide for the same crop in different Member States, a situation that gave rise to questions from consumers, farmers and traders. The new rule, Regulation (EC) No 396/2005, sets harmonised MRLs for pesticides.

The new Regulation covers approximately 1100 pesticides currently or formerly used in agriculture in or outside the EU. It lists MRLs for 315 agricultural products. These MRLs also apply to processed products, adjusted to take account of dilution or concentration during processing.

The European Food Safety Authority (EFSA) is responsible for the safety assessment, which is based on the properties of the pesticide, on the maximum levels expected on food and on the different diets of European consumers. A database has also been created on the European Commission's website, which can be consulted for the MRL applicable to each crop and pesticide. The database is freely and easily accessible.

Source: European Union www.ec.europa.eu, September 25, 2008

Rise in demand for Indian vegetables and fruits in UK markets

Traditional Indian vegetables are being grown extensively across Britain and being imported in large quantities as supermarkets cater to high demand for a range of exotic varieties. The Indian vegetables being stocked by supermarkets such as Tesco include radish (*mooli*), okra (*bhindi*), and calabash (*dudhi*). The prominent retail chain has doubled its range of world food produce and now offers 50 varieties of exotic fruits and vegetables.

The current spurt in demand is driven by the presence of large communities with origins in the Indian sub-continent in Britain and frequent visits by British tourists to India and other countries where they develop a taste for such vegetables and fruits. According to industry sources, popularity of holidays to India, Thailand and the Caribbean, where most of these vegetables and fruits are grown, has also been a big influence.

Source: www.fnbnews.com, July 05, 2008

Alert for food makers in EU on contaminated guar gum from India

Guar gum has a wide array of food applications as a thickening agent in formulations ranging from dressings to instant soups.

The European Commission (EC) has recently tightened imports of guar gum from India following the discovery of high dioxin levels. The dioxins were linked to contamination with pentachlorophenol (PCP), a fungicide used in food and feed. Exposure to pentachlorophenol, once used widely as a pesticide and wood preservative, is harmful to the liver, can have reproductive and developmental effects, as well as causing increases in body temperature.

According to EC's new rules, from May 05, 2008, all guar gum and guar gum products entering the EU-27 bloc have to be tested by the Indian authorities, or by food operators once the products have arrived at the border.

Guar gum is mainly cultivated in India and Pakistan. India is the largest exporter of guar gum and supplies around 80-85% of the total guar gum requirements in the global markets. According to Guar Gum Manufacturers' Association of India, exports of guar gum from India could be lower than last year as the US and European Union witnesses a slowdown in their economy. Further, EC's new rule may also add to slowdown in exports of guar gum from India.

Source: www.foodqualitynews.com, October 9, 2008

The news items and information published herein have been collected from various sources, which are considered to be reliable. While every care has been taken for authenticity of the material published, Exim Bank accepts no responsibility for authenticity or accuracy of such items.

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