Food Laws and Regulations

1. Introduction
2. Important food issues
3. The challenges for food control authorities
4. Food standards
5. Food regulations

1. Introduction

Effective national food control systems are essential to protect the health and safety of domestic consumers. They are also critical in enabling countries to assure the safety and quality of their foods entering international trade and to ensure that imported foods conform to national requirements. The new global environment for food trade places considerable obligations on both importing and exporting countries to strengthen their food control systems and to implement and enforce risk-based food control strategies.

Consumers are taking unprecedented interest in the way food is produced, processed and marketed, and are increasingly calling for their Governments to accept greater responsibility for food safety and consumer protection.

The Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) and many other agencies, Food Safety and Standards Authority of India (FSSAI) as in case of India have a strong interest in promoting national food control systems that are based upon scientific principles and guidelines, and which address all sectors of the food chain. This is particularly important for developing countries as they seek to achieve improved food safety, quality and nutrition, but will require a high level of political and policy commitment.

In many countries, effective food control is undermined by the existence of fragmented legislation, multiple jurisdictions, and weaknesses in surveillance, monitoring and enforcement. These guidelines seek to provide advice to national authorities on strategies to strengthen food control systems to protect public health, prevent fraud and deception, avoid food adulteration and facilitate trade. They will enable authorities to choose the most suitable options for their food control systems in terms of legislation, infrastructure and enforcement mechanisms.

2. Important food issues

Food Safety, Quality and Consumer Protection - The terms food safety and food quality can sometimes be confusing. Food safety refers to all those hazards, whether chronic or acute, that may make food injurious to the health of the consumer. It is not negotiable. Quality includes all other attributes that influence a products value to the consumer including negative attributes such as spoilage, contamination with filth, discoloration, off-odors and positive attributes such as the origin, colour, flavour, texture and processing method of the food. This distinction between safety and quality has implications for public policy and influences the nature and content of the food control system most suited to meet predetermined national objectives.

a. Food control

It is defined as a mandatory regulatory activity of enforcement by national or local authorities to provide consumer protection and ensure that all foods during production, handling, storage, processing, and distribution are safe, wholesome and fit for human consumption; conform to safety and quality requirements; and are honestly and accurately labelled as prescribed by law. The foremost responsibility of food control is to enforce the food law(s) protecting the consumer against unsafe, impure and fraudulently presented food by prohibiting the sale of food not of the nature, substance or quality demanded by the purchaser.

Confidence in the safety and integrity of the food supply is an important requirement for consumers. Food borne disease outbreaks involving agents such as *Escherichia coli*, *Salmonella* and chemical contaminants highlight problems with food safety and increase public anxiety that modern farming systems, food processing and marketing do not provide adequate safeguards for public health. Factors which contribute to potential hazards in foods include improper agricultural practices; poor hygiene at all stages of the food chain; lack of preventive controls in food processing and preparation operations; misuse of chemicals; contaminated raw materials, ingredients and water; inadequate or improper storage, etc.

Specific concerns about food hazards have usually focused on:

- Microbiological hazards;
- Pesticide residues;
- Misuse of food additives;
- Chemical contaminants, including biological toxins; and
- Adulteration.

The list has been further extended to cover genetically modified organisms, allergens, veterinary drugs residues and growth promoting hormones used in the production of animal products. Consumers expect protection from hazards occurring along the entire food chain, from primary producer through consumer (often described as the farm-to-table continuum). Protection will only occur if all sectors in the chain operate in an integrated way, and food control systems address all stages of this chain. As no mandatory activity of this nature can achieve its objectives fully without the cooperation and active participation of all stakeholders e.g. farmers, industry, and consumers, the term Food Control System is used in these Guidelines to describe the integration of a mandatory regulatory approach with preventive and educational strategies that protect the whole food chain. Thus an ideal food control system should include effective enforcement of mandatory requirements, along with training and education, community outreach programmes and promotion of voluntary compliance. The introduction of preventive approaches such as the Hazard Analysis Critical Control Point System (HACCP), have resulted in industry taking greater responsibility for and control of food safety risks. Such an integrated approach facilitates improved consumer protection, effectively stimulates agriculture and the food processing industry, and promotes domestic and international food trade.

b. Global Considerations

(i) International Trade - With an expanding world economy, liberalization of food trade, growing consumer demand, developments in food science and technology, and improvements in transport and communication, international trade in fresh and processed food will continue

to increase. Access of countries to food export markets will continue to depend on their capacity to meet the regulatory requirements of importing countries.

(ii) Codex Alimentarius Commission - The Codex Alimentarius Commission (CAC) is an intergovernmental body that coordinates food standards at the international level. Its main objectives are to protect the health of consumers and ensure fair practices in food trade. The CAC proved to be most successful in achieving international harmonization in food quality and safety requirements. It has formulated international standards for a wide range of food products and specific requirements covering pesticide residues, food additives, veterinary drug residues, hygiene, food contaminants, labelling etc. These Codex recommendations are used by governments to determine and refine policies and programmes under their national food control system.

More recently, Codex has embarked on a series of activities based on risk assessment to address microbiological hazards in foods. Codex work has created worldwide awareness of food safety, quality and consumer protection issues, and has achieved international consensus on how to deal with them scientifically, through a risk-based approach. As a result, there has been a continuous appraisal of the principles of food safety and quality at the international level. There is increasing pressure for the adoption of these principles at the national level.

3. The challenges for food control authorities

Globally, the incidence of food borne diseases is increasing and international food trade is disrupted by frequent disputes over food safety and quality requirements. The modern concept of risk assessment provides guidelines with important information on the principles and practices of food control and the trend away from a merely punitive to a preventive approach to food control.

Increasing burden of food borne illness and a new and emerging food borne hazards, this may be due to the rapidly changing technologies in food production, processing and marketing;

- Developing science-based food control systems with a focus on consumer protection;
- International food trade and need for harmonization of food safety and quality standards;
- Changes in lifestyles, including rapid urbanization; and
- Growing consumer awareness of food safety and quality issues and increasing demand for better information.

Responsibility for food control in most countries is shared between different agencies or ministries with duplication of regulatory activity, fragmented surveillance and a lack of coordination are common resulting in wide variations in expertise and resources between the different agencies and the responsibility for protecting public health may conflict with obligations to facilitate trade or develop an industry or sector.

4. Food standards

Food law has traditionally consisted of legal definitions of unsafe food, and the prescription of enforcement tools for removing unsafe food from commerce and punishing responsible parties after the fact. It has generally not provided food control agencies with a clear mandate and authority to prevent food safety problems. The result has been food safety programmes that are reactive and enforcement-oriented rather than preventive and holistic in their

approach to reducing the risk of food borne illness. To the extent possible, modern food laws not only contain the necessary legal powers and prescriptions to ensure food safety, but also allow the competent food authority or authorities to build preventive approaches into the system.

In addition to legislation, governments need updated food standards. In recent years, many highly prescriptive standards have been replaced by horizontal standards that address the broad issues involved in achieving food safety objectives. While horizontal standards are a viable approach to delivering food safety goals, they require a food chain that is highly controlled and supplied with good data on food safety risks and risk management strategies and as such may not be feasible for many developing countries. Similarly, many standards on food quality issues have been cancelled and replaced by labelling requirements.

In preparing food regulations and standards, countries should take full advantage of Codex standards and food safety lessons learned in other countries. Taking into account the experiences in other countries while tailoring the information, concepts and requirements to the national context is the only sure way to develop a modern regulatory framework that will both satisfy national needs and meet the demands of the SPS Agreement and trading partners.

Food legislation should include the following aspects:

- It must provide a high level of health protection;
- It should include clear definitions to increase consistency and legal security;
- It should be based on high quality, transparent, and independent scientific advice following risk assessment, risk management and risk communication;
- It should include provision for the use of precaution and the adoption of provisional measures where an unacceptable level of risk to health has been identified and where full risk assessment could not be performed;
- It should include provisions for the right of consumers to have access to accurate and sufficient information;
- It should provide for tracing of food products and for their recall in case of problems;
- It should include clear provisions indicating that primary responsibility for food safety and quality rests with producers and processors;
- It should include obligation to ensure that only safe and fairly presented food is placed on the market;
- It should also recognize the country's international obligations particularly in relation to trade; and
- It should ensure transparency in the development of food law and access to information.

(b) Food Control Management - Effective food control systems require policy and operational coordination at the national level. While the detail of such functions will be determined by the national legislation, they would include the establishment of a leadership function and administrative structures with clearly defined accountability for issues such as:

- The development and implementation of an integrated national food control strategy;
- Operation of a national food control program;
- Securing funds and allocating resources;
- Setting standards and regulations;

- Participation in international food control related activities;
- Developing emergency response procedures;
- Carrying out risk analysis; etc.

Core responsibilities include the establishment of regulatory measures, monitoring system performance, facilitating continuous improvement, and providing overall policy guidance.

(c) Inspection Services - The administration and implementation of food laws require a qualified, trained, efficient and honest food inspection service. The food inspector is the key functionary who has day-to-day contact with the food industry, trade and often the public. The reputation and integrity of the food control system depends, to a very large extent, on their integrity and skill.

The responsibilities of the inspection services include:

- Inspecting premises and processes for compliance with hygienic and other requirements of standards and regulations;
- Evaluating HACCP plans and their implementation;
- Sampling food during harvest, processing, storage, transport, or sale to establish compliance, to contribute data for risk assessments and to identify offenders;
- Recognizing different forms of food decomposition by Organoleptic assessment; identifying food which is unfit for human consumption; or food which is otherwise deceptively sold to the consumer; and taking the necessary remedial action;
- Recognizing, collecting and transmitting evidence when breaches of law occur, and appearing in court to assist prosecution;
- Encouraging voluntary compliance in particular by means of quality assurance procedures;
- Carrying out inspection, sampling and certification of food for import/export inspection purposes when so required;
- In establishments working under safety assurance programmes such as HACCP, conduct risk based audits.

Proper training of food inspectors is a prerequisite for an efficient food control system. As current food systems are quite complex, the food inspector must be trained in food science and technology to understand the industrial processes, identify potential safety and quality problems, and have the skill and experience to inspect the premises, collect food samples and carry out an overall evaluation. The inspector must have a good understanding of the relevant food laws and regulations, their powers under those laws, and the obligations such laws impose on the food sector. They should also be conversant with procedures for collecting evidence, writing inspection reports, collecting samples and sending them to a laboratory for analysis. With gradual introduction of HACCP systems in the food industry, the inspector should be trained to handle HACCP audit responsibilities. Clearly, there is a continuing need for training and upgrading the skills of existing inspectional staff and having a policy for human resource development, especially the development of inspectional specialists in specific technical areas.

(d) Laboratory Service: Food Monitoring and Epidemiological Data - Laboratories are an essential component of a food control system. The establishment of laboratories requires considerable capital investment and they are expensive to maintain and operate. Therefore careful planning is necessary to achieve optimum results. All food analysis laboratories may

not be under the control of one agency or ministry, and a number could be under the jurisdiction of the states, provinces and local authorities. The Food Control Management should, however, lay down the norms for food control laboratories and monitor their performance.

The laboratories should have adequate facilities for physical, microbiological and chemical analyses. In addition to simple routine analysis, the laboratories can be equipped with more sophisticated instruments, apparatus and library facilities as required. It is not only the type of equipment that determines the accuracy and reliability of analytical results but also the qualification and skill of the analyst and the reliability of the method used. The analytical results of a food control laboratory are often used as evidence in a court of law to determine compliance with regulations or standards of the country. It is therefore necessary that utmost care be taken to ensure the efficient and effective performance of the laboratory. The introduction of analytical quality assurance programmes and accreditation of the laboratory by an appropriate accreditation agency within the country or from outside, enables the laboratory to improve its performance and to ensure reliability, accuracy and repeatability of its results. Prescription of official methods of sampling and analysis also support this effort.

(e) Information, Education, Communication and Training - An increasingly important role for food control systems is the delivery of information, education and advice to stakeholders across the farm-to-table continuum. These activities include the provision of balanced factual information to consumers; the provision of information packages and educational programmes for key officials and workers in the food industry; development of train-the-trainer programmes; and provision of reference literature to extension workers in the agriculture and health sectors.

However, setting up of international standards for the purpose of food safety depends up on the following agreements:

1. Agreement on agriculture (AOA)
2. Agreement on the application of sanitary and phyto-sanitary measures (SPS agreement)
3. Agreement on Technical Barriers on Trade (TBT agreement)
4. International Health Regulation (2005)

5. Food regulations

Food control agencies should address the specific training needs of their food inspectors and laboratory analysts as a high priority. These activities provide an important means of building food control expertise and skills in all interested parties, and thereby serve an essential preventive function.

Food regulations generally cover the following:

- General regulations
- Food standards
- Food hygiene
- Food additives
- Pesticides
- Veterinary drug residues
- Food packaging and labeling

- Food advertising

A few of the Food Laws which can be declared voluntarily by the manufacturers of finished products are as follows:

- Agmark Standards (AGMARK)
- Codex Alimentarius Standards (CAS)
- Bureau of Indian standards (BIS) and Specifications
- Consumer Protection Act, 1986

Some of the food laws and regulations/guidelines established in India

- Food Safety and Standards Act (FSSA), 2006
- Food Safety and Standards Rules, 2011
- Edible Oils Packaging (Regulation) Order, 1998
- Environment (Protection) Act, 1986
- Fruit Products Order (FPO), 1955
- Meat Food Products Order (MFPO), 1973
- Milk and Milk Product Order (MMPO), 1992
- Solvent Extracted Oil, De-oiled Meal and Edible Flour (Control) Order, 1967
- Standards of Weights and Measures Act, 1976
- The Essential Commodities Act, 1955
- The Export (Quality Control and Inspection) Act, 1963
- The Insecticides Act, 1968
- Vegetables Oil Products (Control) Order, 1998
- Prevention of Food Adulteration Act & Rules (PFA Act), 1954

Government of India has established four central food laboratories serving as concerned laboratories for analysis of food supplies. These are:

1. Central Food Laboratory, Kolkata
2. Food Research and Standardization Laboratory, Ghaziabad
3. Public Health Laboratory, Pune
4. Central Food Technological and Research Institute, Mysore

Worldwide list of main International Standards and Statutes:

1. International Standards Organization (ISO)
2. Codex Alimentarius Commission (CAC)
3. World Health Organization (WHO)
4. Food and Agricultural Organization (FAO)
5. World Trade Organization (WTO)
6. World Organization for Animal Health (WOAH)
7. European Union Standards (EU standards)
8. Food and Drugs Administration (FDA),
9. International Plant Protection Organization (IPPO)
10. Convention on Bio Diversity (CBD)
11. International Commission on Microbiological Specifications for Foods (ICMSF)

Conclusion: Every nation needs an effective food legislation and food control service to promote a safe, honestly presented food supply, and to protect consumers from contaminated, adulterated, and spoiled foods.