NEW POLICY AND PROGRAMME TO ENSURE FOOD SAFETY IN INDIA
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Introduction

Food safety and quality have been gaining considerable importance at the national and international level since enhanced food safety is key to improvements to health and nutrition. Food safety, besides reducing cost of food borne diseases, enhances food security, increased trade, expands income generation and thus assists in poverty alleviation, raise living standard and stimulate economic development. Improved food quality reduce negative attributes of food such as spoilage, contamination with filth, discoloration, etc., and enhance positive aspects of food, such as its colour, flavour or texture, that increase its value to consumers. Current agricultural production practices pose risk to human health, which calls for increasing attention to food safety in India. In the wake of the global trend of increase in food prices, Food safety assumes greater importance. The estimates that food production needs to rise by 50 percent by the year 2030 to meet rising demand and the global trend of increase in food prices enhance importance of food safety.

Existing and Emerging Food Safety Problems

A variety of chemical, biological and physical hazards are the major causes of food safety problems. Among these the bacterial contaminants, environmental contaminants including pesticide residues, mycotoxins and adulterants have been reported to be responsible for causing large-scale outbreaks of food poisoning and smaller incidents. These include various “food poisonings” reported in newspapers in India from time to time, outbreaks of Lathyrisim, epidemic dropsy, venoocclusive disease, various mycotoxicoses and food borne disease due to chemical toxins. Although not all food incidents are injurious to health, nevertheless they undermine consumer confidence in food safety and are costly to individual companies and national economies. Novel foods, such of unapproved varieties of genetically modified foods (e.g. star link variety of maize) have in the past posed problems of food allergenicity.

Recent Government Initiatives on Food Safety

In India effective food control system is undermined by plethora of fragmented legislation, multiple jurisdictions and weakness in surveillance, monitoring and enforcement, which neither assures safety, hygiene or quality. The Government of India during 2005 had enacted the Food Safety and Standard Bill to consolidate the laws relating to food and to establish the Food Safety and Standard Authority of India for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import.
It is claimed by the Ministry of Food Processing Industries to be contemporary, comprehensive and ensure better consumer safety through food safety management systems and setting standard based on science and transparency as also meet the dynamic requirements of international trade and Indian food trade and industry. The main features of the food law is:

a) movement from multilevel and multi departmental control to integrated line of command
b) integrated response to strategic issues
c) single reference point for all matters related to food safety standards regulatory and enforcement
d) shift from mere regulatory regime to self compliance through food safety management systems
e) responsibility of food business operators to ensure that food imported, produced, processed, manufactured or distributed is in compliance with the domestic food laws
f) provision for civil penalties for minor offences and criminal action for serious violations.

Further the licensing for manufacture of food products, presently granted by the Central agencies handling Fruit Products Order, Meat products Order, Milk and Milk Products Order, Solvent Extracted oil, Deoiled meal, and Edible Flours Control Order etc. would stand transferred to State Governments through the State Commissioner of Food Safety towards greater decentralization.

**Food Acts/Orders, Which Stand Repealed on Commencement of The Act Include**

1. The Prevention of Food Adulteration Act 1954
2. The Fruit Products Order 1955
3. The Milk and Milk Products order, 1992
4. The Meat Products Order 1973
5. The Vegetable Oil Products (Control) Order 1947
6. The Edible Oil Packaging (Regulation) Order 11988
7. The Solvent Extracted Oil, Deoiled Meal, and Edible Flour (Control) Order 1967
8. The Infant Milk Substituted, Feeding, Bottles and Infant Foods (Regulation of production, Supply and Distribution) Act 1992
9. Any other order issued under the Essential Commodities Act, 1955 relating to Food

**Food Laws From Which Sections Relating to Food are Required to be Deleted/Modified on Commencement of Act are:**

2. The Export (Quality Control and Inspection) Act, 1963
4. The bureau of Indian Standards Act, 1986
5. The Agricultural produce (Grading and Marketing) Act 1937
6. The Customs Act, 1962
7. The Foreign Trade (Development and Regulation) Act 1992
8. Other Acts/Orders issued by the State Governments and Union Territories

The Government of India had also declared year 2008-09 as 'Food Safety and Quality Year'. These initiatives should ensure safe, healthy and sustainable food supply, and bring about awareness amongst consumers to demand safe and quality food. The Ministry of Food Processing organized a National Seminar on Food Safety and Quality Management System from Farm to Fork on June 11, 2008. During the year the Government will implement various schemes such as establishment of mega food park, integrated cold chain facilities, modernizing abattoirs, upgrading food testing and quality control laboratories, upgrading hygiene and quality of street foods, institute award for innovation in food quality, focus on developing quality and safety standards of food products, organizing awareness programmes on food safety and quality and launching postage stamp to commemorate food safety and quality year 2008-2009.

Policy Linkages

At the policy level, Food Processing Policy has been enunciated by the Ministry of Food Processing in 2005. The policy includes reference to Food Safety and Hygiene. It calls for certifying authorities to be vigilant in enforcing standards at least in case of processed foods, training of quality enforcement staff in HACCP, GMP and GHP requirement, well equipped and certified laboratory requirements, harmonization of national standards with Codex standards and relevant science based standards relevant to Indian conditions. The first National Health Policy in 1983 aimed to achieve the goal of ‘Health for All’ by 2000 AD, through the provision of comprehensive primary healthcare services had stressed close coordination with health-related services and activities like nutrition, drinking water supply and sanitation. The Health Policy of 2002 recognized that India has environmental health risks of both categories: traditional hazards related to poverty and lack of development, such as lack of safe water, inadequate sanitation and waste disposal, and modern hazards caused by development that lacks environmental safeguards, such as exposure to agro-industrial chemicals and waste. These statements have a bearing on food safety issues such as hygiene and veterinary/pesticide residues.

Factors Influencing Food Safety Policy and Programmes

Globalisation

During recent years there is an increasing trend towards integration of countries around the world in terms of increased and easy movement of capital, knowledge,
goods and people. The changing global factors that affect national food safety systems include increasing volume of international trade, expanding international and regional bodies and resulting legal obligations such as SPS/TBT agreements, increasing food types and geographical sources, intensification and industrialization of agriculture and animal production, increased travel and tourism, changing food handling patterns, new food processing methods and new food and agricultural technologies. Agriculture trade is influenced by high protection and government intervention, often citing food safety reasons. A good example is the European Union regulations on aflatoxins, which is stringent, much more than required from health risk assessment.

**Economics**

The world is experiencing a dramatic increase in food prices. During the first three months of 2008, international nominal prices of all major food commodities reached their highest levels in nearly 50 years while prices in real terms were the highest in nearly 30 years. Long term growth in farm income have not kept pace with income of growth with others sectors of economy. The food safety is at risk because of raising food prices. It is a common experience in India that the quality of food and extent of adulteration depends on the price of the food. Generally cheaper foods are more adulterated and are of least quality. People are forced to buy inferior quality food products which could result in incidences ranging from large-scale outbreaks of food poisoning to smaller incidents. Those rich can afford to buy foods of good quality by paying exorbitant prices while the poor and the not so rich may have to depend on lower quality foods. In such circumstances the Government have the responsibility to ensure safe food for all.

The economic costs of food borne diseases are considerable. It has been calculated that on the basis of per capita income, the economic burden on people in India affected by an outbreak of *Staphylococcus aureus* food poisoning was found to be higher than in case of similar outbreak in the USA. This case study clearly indicates that impact of economics on food safety is greater in a country like India than in developed countries. Thus economic cost of food borne disease and trade issues including reduced export earnings loss due to improper food safety, hygiene and quality need be taken into consideration while framing food safety policy. Factors such as availability of resources, budget and staff often determine the efficiency of food control system and economic cost will be a major consideration in the policy evolution.

**Changing scenario of retailing in India**

The food retailing business in India is growing fast from the traditional rural village shandies, and "kirana stores", to the urban roadside hawkers and pushcarts, small to medium food outlets( departmental stores, supermarkets/hyper markets) and MNC Chains. The food flows from the farmers, farm service centres, market yards, processors, manufacturers and
importers to these outlets. Sale of packed foods for elimination or prevention of hazards or reduce them to acceptable levels, is increasing. A strict vigilance to ensure the supply the safe, good quality produce at these centres is essential. High risk category products like fish, meat and dairy products need special attention. The high cost products like edible oil and items of mass consumption like rice and dhal as well as the ready to eat foods also need adequate “policing” to ensure safety to the consumer.

Regulatory, trade and consumer consideration including labelling,

Food is the most regulated commodity in the world. Not only the food that is entering the international market, but also the foods traded domestically are subjected to various food control regulations. The consumers expect the supply of good quality, wholesome food free from contaminants and adulterants. As the literacy rate increases, his expectation of information on food through labelling also increases. The introduction of novel foods including genetically modified foods, availability of food that is imported to the country necessitates making labelling compulsory. The Example of wax coating of fruits illustrates the need for labelling for better consumer awareness. Waxes are used only in tiny amounts to provide a microscopic coating surrounding the entire product. Waxes help inhibit mold growth, protect produce from bruising, prevent other physical damage and disease, and enhance appearance. Wax coatings help retain moisture to maintain quality from farm to table including when produce is shipped from farm to market specially exported to far away countries. In the USA, coatings used on fruits and vegetables must meet Food and Drug Administration food additive regulations for safety. Produce shippers and supermarkets are required by federal law to label fresh fruits and vegetables that have been waxed with information “Coated with food-grade vegetable-, petroleum-, beeswax-, or shellac- based wax or resin, to maintain freshness.” Consumers in India, by and large are not aware that the shining American apples sold in the market are coated with wax several months before they are marketed in India.

Political considerations

Subsidy is a word popular with the politicians all over the world, be it in developed countries of American or European continent or India. The Governments provide substantial amount of money to a particular groups or particular cause such as farmers subsidy, fertilizers subsidy etc. Food safety being an area absolutely essential for a welfare state both from the public health and economical perspectives is a right subject to invoke subsidy. Such a subsidy can be used for building up substantial infrastructure for food safety such as the creation of laboratory, for spreading awareness on food safety issues.

Scientific advancement

Food safety issues are closely linked to developments in Science and technology. Good science is considered critical to identification of technology to
detect new and changing public hazards, more effective and efficient approaches
to solving public health problems as well as for regulatory decision making. Food safety policy should be based on well-researched scientific facts supported by adequate data.

Elements to be Addressed in the Food Safety Policy

Policy is documented guidelines on the choice of options and associated judgments for their application at appropriate decision points in the food safety area such that the scientific integrity of the process is maintained. It is developed to provide an agreed framework for the successful conduct of food safety operations in the country. A food safety policy underpins a clear understanding of the scope of the entire process of food safety and the manner in which it will be conducted. Establishment of food safety policy provides guidance as to the appropriate level of protection and the scope of the food safety. While establishing food safety policy, it should be carried through an open and transparent process. Increased transparency also protects the interests of consumers, as well as of trading partners.

A team approach need to be followed by drawing experts on food safety from Government (local government, state and central regulatory agencies) industry, consumer organization, academia, professional societies, representatives of farmers including dairy, fishery, animal husbandry and other food producers, food processors, manufacturers, distributors, consumer groups, public health community, health care providers, trade associations, media.

Another important issue is the approach to be followed. An evolutionary approach is better than revolutionary approach. Policy should choose based on the experience and existing set up. Consolidation of food safety agencies under a single independent agency would be effective and efficient. Integrating the overlapping responsibilities for food safety into a single agency or department can create synergy and economies of scale, as well as provide more focused and efficient efforts to protect the nation's food supply. A system with diffused and overlapping lines of authority and responsibility cannot effectively and efficiently accomplish its mission and meet new food safety challenges.

One of the important issues is that conflict of interests between promotions of product and monitoring of safety should be avoided. For example the food control in India was in the past mainly handled by the Ministry of Health, either Central or State. However there were suggestions that the modern food law need to be handled by Ministry of Food Processing Industries. Similarly it has been debated whether the control of genetically modified foods should be with the Department of Biotechnology or Ministry of Environment or with the Ministry of Health. A general policy that a promotional ministry should not be involved in implementing the regulations is desirable.
While framing the policy it needs to be kept in mind that present trend all over the world are:

- Increasing reliance on science as the basic principle governing development of food safety standards
- Shifting the primary responsibility for food safety to industry
- Adopting a “production-to-consumption” approach to food control
- Giving industry more flexibility in implementation of controls
- Ensuring the cost-effectiveness and efficiency of government control functions
- Increasing the role of consumers in decision making
- Recognizing the need for expanded food monitoring
- Epidemiologically based food source attribution
- Adopting a more “integrated” approach to working with related sectors (such as animal and plant health)
- Adopting risk analysis as an essential discipline to improve food safety

The wide variation in safety standards within the EU or frequently changing regulations without sufficient scientific probity brings to a naught the transparency, equivalence and harmonization troika of SPS Agreement. Though it would be idealistic have a policy which would aim at harmonization of food standards with Codex and leading groups such as EU/countries, realistically the national interests have to be taken into consideration. The policy should be documented to ensure consistency, clarity and transparency food safety systems today depend increasingly on an integrated systems approach that shares responsibility for implementing food safety decisions. According to George the Indian producers of primary agricultural exports are competitive in the global market, the value adding industrial /processing sector that is uncompetitive. This is mainly due to the tariff escalation and the market access plus conditions like the sanitary and phytosanitary measures practiced in a stringent manner in most of the developed countries. Food safety policies need to include measures to overcome such problems.

**Actions that need to be taken for Strengthening Food Safety Policy and Programmes**

1. Popularization of food safety concept through mass media (food safety, quality and hygiene literacy movement)
2. Increased education of producers, processors and consumers through food inspectors
3. Strengthening educational opportunities for stakeholders such as food inspectors, catering personnel to acquire knowledge on food safety through Open University education system
4. Strengthening of infrastructure on food safety including Legal frame work and support structures: Testing for quality, laboratory infrastructure, Standards, Regulations/ enforcements
5. Introduction and implementation of effective food labelling
6. Harmonize with international regulations but keep national interests in mind
7. Emphasis on enforcement of regulations including stricter vigilance of imported foods
8. Strong involvement of state Governments in implementation with uniform and effective enforcement in various states
9. Greater involvement of rural sector is food safety issues
10. Creation of food safety related jobs especially in the rural sector
11. Harmonising relevant sector policies such as food security and nutrition policy, Food Processing Policy etc with Food safety policy
12. Fixing Clear responsibilities:
   i. Businesses take responsibility for the safety of the food that they produce, import, pack, transport, store or sell; food producers including farmers; primary and secondary processors take the primary responsibility for the food they produce for safety and quality. Processors for the foods that are processed and packed, traders for the foods they market. They should not place on the market unsafe food; labelling, advertising and presentation of food must not mislead consumers.
   ii. Responsibility for enforcement is for the local authorities and state Governments. Enforcement officers must ensure that they apply food law in a fair and consistent way and use their professional judgment to decide what action to take during an incident based upon an assessment of the risks to public health.
   iii. Role of Central agency is facilitating and coordinating work across all stakeholders as well as providing support and encouraging the sharing of best practices.
13. Sound and continuous research base to investigate new food borne diseases, innovate methods of detection of adulterants, contaminants, and carry out risk assessments of existing and emerging problems e.g. genetically modified foods.
14. HACCP measures relevant to each sector be identified after a carefully study and implemented rather than purely relying only on obtaining certificates.
15. Food safety prevention programmes are introduced at the food production, processing and distribution chain.

Example of A Programme for Introduction of Preventive Measures at the Production, Processing and Distribution Chain so that the Food from Farm to Table is Safe

The introduction of preventive measures at all stages of the food production and distribution chain, rather than only inspection and rejection at the final stage, makes better economic sense. Food hazards and quality loss may occur at a variety of points in the food chain. A well structured, preventive approach that controls production and process is the preferred method for improving food
safety and quality. Potential food hazards can be minimized along the food chain through the application of good practices.

Strategy for laying emphasis for introduction of food safety preventive measures at different levels of food sector need to be devised. The task of reaching the masses through out the country could be achieved by identifying the centre where such message could be spread in the country. The ideal place for such activity could be the market place, where producers and buyers interact through sellers of food commodities. Various activities such as involving various stakeholders for changing emphasis from end product quality control to preventive measures through out the food chain and introducing concepts like traceability need to be involved. Identification of key personnel at the grass root level for implementing the food safety preventive measures is essential. Mechanism of coordination at the grass root level (panchayat or village level) for implementing food safety preventive measures need to be evolved. Guidance to stakeholders for implementation of preventive food safety measures needs to be provided. Preparation of specific guidelines for GAP, GMP, GHP, GVP, and GTP relevant to local scenario is essential. Provide technical support to the key personnel in the use of non-regulatory options such as guidelines, advice and education. A mechanism for its dissemination among the stakeholders needs to be developed.

Building the partnership among the government & private stakeholder by holding group discussion on implementation of food safety preventive measures at the division level involving relevant grass root level officials and private stakeholders would help a great deal. Mechanisms of building coordination between different entities (plant protection, Livestock, Fisheries, food and sanitary inspectors) have to be worked out.

Way ahead

The way ahead for evolving a food safety policy by the Government of India would be to organize workshop specifically for the purpose. All the stakeholders ranging from Government officials from the concerned ministries, quasi government bodies dealing with various aspects of food, food producers, processors, academicians and researchers, trade and industry representatives and consumers groups need to be involved. A task force need to be constituted including interminstirial representatives to draft a food safety policy document. Such a document could then be placed before the public for comments and the policy finalized. This need to be followed by the development of appropriate programmes to implement the policy and at the same time strengthening the existing infrastructure both at the centre and state levels. Successful implementation of such a programme throughout the country uniformly would ensure safe, hygienic and quality food both for domestic consumption and for export.
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