



Workshop On Improving Safety & Quality in Food Retail Chain

14th December, 2011
Mumbai



Food and Agriculture Organization of the United Nations
Regional Office for Asia and the Pacific

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in Food Retail Chain**

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Report

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Foreword

The food retail sector is a growing market and according to a market research is currently estimated at more than USD 5 trillion per year. With the increasing importance of food safety both globally and domestically, the implications for the retail sector are very significant. Retailers are beginning to realize the need for food safety and quality and have been making efforts to put in place norms for their companies, especially at the level of procurement, processing, packaging, storage, etc., and a few retailers are also moving toward food safety certification systems such as HACCP, ISO 22000, BRC, etc. Although, some efforts towards food safety and quality are being made, these steps are not sufficient and problems are being observed from the consumer perspective which include issues such as expired or close to expired products on shelves, non-compliance with labelling regulations, poor temperature controls on frozen products to the point that even thawed products are seen in retail outlets and there is generally no control by retailers over quality of branded products.

The safety and quality of end-products requires implementation of a risk-based management system approach through all stages of production, distribution, storage, transportation and marketing of food products in the complete food chain. The entire chain is not under the control of only retailers but a range of stakeholders and therefore cannot be handled by retailers alone but needs a coordinated approach. The government has a major role in terms of providing an enabling environment. The area is generally neglected in many countries.

The Food and Agriculture Organization of the United Nations (FAO) under its strategic objective of improving quality and safety at all stages of the food chain, and recognizing that a major issue faced by both developing and developed countries is achieving effective and integrated controls throughout the pre-production to consumption continuum which includes the retail level, decided to look into the problems and issues in the retail sector. FAO support was considered important to bring international experience towards understanding the various facets of the risk-based approach to be applied throughout the food chain and to facilitate in bringing together various stakeholders, both from the public and private sector, for laying down clearly defined roles and responsibilities.

India is an emerging and fast growing market in the retail sector. The Food Safety and Standards Authority of India (FSSAI), established under the Food Safety and Standards Act, 2006 is responsible for laying down science based standards for articles of food and for regulating their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption. Although the mandate exists, the standards covering the entire food chain including retail as well as the control mechanisms to

ensure implementation had not been laid down in India. This needs to be driven by both the retailers and the government with active involvement of other stakeholders, namely producers, processors, transporters, service suppliers, consumers, etc.

With this in view, FAO, jointly with FSSAI, organized this workshop in India specifically to develop norms to be implemented by the retail sector, to seek commitment by all stakeholders towards implementation of a risk-based system across the food chain for ensuring availability of safe and quality products at retail outlets (organized retail), to identify actions and steps for putting the system in place and to develop a roadmap for implementation.

I take this opportunity to convey FAO's appreciation to the FSSAI, resource persons and all participants of the workshop for their contribution towards development of the recommendations as well as the draft norms for the retail sector. It is hoped that the norms developed and published in this report will provide useful guidance to the government of India as well as other countries of the region, thereby not only providing them assistance but also ensuring that products traded within the region conform to the standards laid down.



Hiroyuki Konuma

Assistant Director-General and
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Executive Summary

1 Executive Summary

The Workshop on “Improving Safety and Quality in the Food Retail Chain” was organized on 14th December 2011 in Mumbai, India. The workshop was organized by Food Safety & Standard Authority of India (FSSAI) and the Food & Agriculture Organization (FAO) of the United Nations with support of Federation of Indian Chamber of Commerce and Industry (FICCI). Participants from the major retailers of India, representatives from consumer and retail association, industry, government, laboratories were present. In addition, technical experts from Thailand representing both government and retail, FAO Regional Office from Asia and the Pacific, Food Safety and Standards Authority of India were present.

The objective of the workshop was to support the development of a strong regulatory mechanism for food safety in retail chain and to ensure its implementation as well as create an enabling environment at various stages where the onus of maintaining quality and safety would lie with the retailer. As a part of the regulatory mechanism or framework, was the development of norms for the retail sector to implement. The expected outcome of the workshop would be to obtain an expression of commitment by all stakeholders towards implementation of a risk-based system across the food chain for ensuring quality and safety of products at retail outlets, finalise the draft norms for retail with respect to food quality and safety and chalk out an action plan/ recommendations for facilitating implementation.

To ensure food safety and maintain product integrity from the source to the customer (farm-to-plate) the food retailing companies would have to establish a totally integrated infrastructure and services package. This connects and maintains the flow of food from the source (farmers/food growers, farm service centres, market yards, processors, importers) to the customer (foodservice outlets, food processing units, food retailers and food exporters). This will help eliminate or prevent identified hazards or reduce them to acceptable levels. This trend is slowly beginning to take shape with the efforts to integrate and consolidate the supply chain in Indian Food Retailing.

The workshop was divided into three sessions; the first was the inaugural in which the introductory remarks were given by Shri V.N. Gaur, CEO, FSSAI which was followed by the theme address by Ms Shashi Sareen, Senior Food Safety and Nutrition Officer, FAO Regional Office for Asia and the Pacific. In the Second Session on Domestic and Global Scenario for Food Safety in retail, national and international speakers from India and Thailand presented both the governmental regulatory system with regard to quality and safety in food retail and the experience and view of the private retail sector towards the best practices of domestic and global retailers for ensuring safety in food retail chain. The third session was an interactive session in which the draft norms for retail with respect to food safety and quality were discussed and modified according to the suggestions and there were discussions by all stakeholders towards implementation of a risk-based system across the food chain with

respect to food quality and safety and an action plan/ key recommendations were chalked out for facilitating implementation.

Key Recommendations:

i) Draft norms

Draft norms for implementation by retail sector were developed and modified based on comments from various stakeholders. These norms may be considered by FSSAI for the purpose of retail specific regulations as part of schedule 4. However, it was acknowledged that the norms would be effective only when there is an efficient support infrastructure in place. For this all the stakeholders need to come and work together to ensure the availability of safe food for the end consumer.

ii) Building Awareness

Awareness is important at various levels including consumers, manufacturers and retailers, government, etc. Specific steps need to be taken for each level:

- ***Consumers:*** Consumers should be made aware of importance of food safety and what they need to look for in labels. Campaigns and programmes like 'Jaago grahak jaago' should be developed and promoted to educate consumers on food safety issues.
Retail associations, Industry Associations/ Chambers and the Government to work collectively to design specific consumer awareness modules and develop publicity campaigns for further implementation of the same through various means. Industry Associations and Chambers and consumer groups to support such initiatives to facilitate publicity campaigns through seminars, and other capacity building programs.
- ***Manufacturers & Retailers:*** Sensitizing programs for the senior executives and top management of the manufacturing and retail companies highlighting the significance of food safety issues and educating them on the guidelines to be followed for effective implementation of the process to be organised.
- ***Government:*** Sensitizing programs for the central and state government officials to highlight the significance of food safety issue and educate them on the guidelines to be followed for effective implementation of food safety across the food chain as well as the norms for retail to be organised.
- ***Rural areas:*** Education on the importance of hygiene and the need to have safe food may be provided with help of NGOs.

iii) Promoting Education on Food Safety

The topics on food safety to be included in the academic syllabus of educational institutes in higher education, including in the food technology institutes, medical courses and agriculture universities. A recommendation to this effect may be sent to NCERT.

iv) Implementation of amended APMC Act by all states

States that have not amended the APMC Act for direct farm sourcing of fruits & vegetables need to amend the same so that retailers can source directly from farms and thereby ensure quality and safety. States need to be explained the importance of implementing the amended APMC Act.

v) Building efficient Infrastructure:

- *Food Testing Laboratories:* A laboratory networking system to be worked out and made available to the retail value chain with capability of testing pesticide residues, microbiological, antibiotic residue testing, etc.
- *Need for sufficient Government slaughter house / veterinarians:* Government slaughter houses to be set up in state districts as needed. Local authorities need to appoint veterinarians for ante / post mortem inspections and issuance of slaughter tickets in districts where the same are currently not available.
- *Controlled temperature facility:* The possibility of establishing controlled ambient temperature and chilling facilities for carcass / meat at government slaughter houses to be explored to ensure that products are kept in a chilled condition at all times thereby ensuring safety.
- *Storage and Transport:* Logistic and supply chain infrastructure to be strengthened to reduce the huge wastages due to lack of storage and transport. This problem needs to be appropriately addressed.

vi) Harmonization of Laws and Coordination between the Ministries:

- Coordination between different departments especially in relation to retail to be strengthened. All relevant ministries should work towards providing real time information on the issues that may impact the safety of food retail.
- Labeling norms under the Food Safety and Standards Act and the Legal Metrology Act to be harmonized.
- A consolidated labeling guideline for assistance to retail sector to be published

vii) Publications

A food retail newsletter may be published which may include a column on findings of non-compliances in retail sector with inputs from government/ consumer organizations/ industry associations/ chambers based on testing of products/ stores checks to see if norms are being maintained.

The responsibilities for each recommendation were also identified. FAO would be requested for support as needed in specific areas.



Introduction

2 Introduction

Indian food retail market has been expanding significantly in the last few years, growing at a rate of around 30 percent annually. Currently, the retail food sector is US\$ 70 billion and is expected to rise to US\$ 150 billion by 2025. Food retailing has come to a stage where from a period when food items were sold in small road side grocery shops and mandis, haats and bazaars by vendors to currently where food products (processed and groceries) are retailed through supermarket stores. Here consumers can inspect, select and pick up the products they like in a comfortable ambience and still pay a fair price for the product. Thus with growing significance of organized food retailing in India, the issue of ensuring the quality of the products procured through these channel is becoming all the more important. Customers also expect that the products procured through organized and unorganized retailers are safe and meet the quality standards.

The key impediments to food retailing however, include lack of infrastructure, technology and capital. Supply chain for food products has been characterized by extensive wastage and poor handling. An efficient supply chain and distribution structure will not only contribute to raised income levels of the farmers but also ensure availability of quality and safe food within affordable price. In the current scenario, organised retailers in India are beginning to realize the need for as well as importance of food safety and quality and are practicing their self developed control system to ensure right quality and safe food with minimal wastage of the product right from procurement to retail outlet. Although, some efforts toward food safety and quality are being focused at the level of procurement, processing, packaging, storage, etc, and few retailers are also moving toward food safety certification system such as HACCP, ISO 22000, BRC, etc., these steps are not sufficient. The safety and quality of end-product requires implementation of a risk-based management system approach through all stages of production, distribution, storage, transportation and marketing of food products in the complete value chain. The entire chain is not under control of only retailers but a range of stakeholders and therefore needs a coordinated approach. This cannot be handled by retailers alone and requires both support as well as enabling environment to be created by the government.

Although the mandate exists with the Food Safety and Standards Authority of India (FSSAI), established under Food Safety and Standards Act, 2006 for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption, the standards covering the entire food chain as well as the control mechanism to ensure their implementation has not yet been fully laid down in India.

FSSAI recognizes the need to develop retail standards (for the larger organized retail chains as also the smaller kiriyana stores) as well as an effective regulatory mechanism which would place the responsibility on retailers to implement the systems laid down throughout the food value chain.

In the above background, the Food Safety & Standard Authority of India (FSSAI) and the Food & Agriculture Organization (FAO) of the United Nations with support of Federation of Indian Chamber of Commerce and Industry (FICCI) organized this collaborative workshop on “Improving safety & quality in food retail chain” on 14th December 2011 in Mumbai. This workshop, the first of its kind in India, witnessed the participation of all the major retailers of India, representatives from consumer & retail association, industry, government, laboratories and expert consultants.

The objective of the workshop was to support the development of a strong regulatory mechanism for food safety in retail chain and to ensure its implementation as well as create an enabling environment at various stages where the onus of maintaining quality and safety would lie with the retailer. As a part of the regulatory mechanism or framework, was the development of norms for the retail sector to implement. The expected outcome of the workshop would be to obtain an expression of commitment by all stakeholders towards implementation of a risk-based system across the food chain for ensuring quality and safety of products at retail outlets, finalise the draft norms for retail with respect to food quality and safety and chalk out an action plan/ recommendations for facilitating implementation.

Effective implementation of norms would facilitate to ensure customer confidence in products procured through organized retail by strengthening of the safety and quality of food products. It would also place a major responsibility on retailers for being responsible for implementing the systems laid down throughout the food value chain for the products available at their retail outlets. The programme for the workshop is given at Annex 1.

The Food and Agriculture Organization (FAO) under its strategic objective of improving quality and safety at all stages of the food chain supports countries to strengthen controls throughout pre-production to consumption continuum. FAO's support to the workshop was in terms of bringing the international experience towards understanding the various facets of risk-based approach to be applied throughout the food chain, as well as, to facilitate in bringing together various stakeholders, both public and private sectors for clearly defined roles and responsibilities. FAO also envisages that once the model system for India has been developed, this could further be used for implementing in other developing countries of the Region thereby not only helping them but also ensuring that products traded within the region conform to the standards laid down.





Session I: Inaugural Session

3 Inaugural Session

The inaugural session of the workshop commenced with a welcome by **Mr. Sameer Barde**, Assistant Secretary General, FICCI. Mr. Barde gave an overview of the organized retail in India and the need for retailers to recognize the safety & quality issues in food retailing. He stated that the workshop would highlight the current scenario in India and in similar economies with respect to food safety in retail and would identify the steps needed to improve it. He mentioned that the purpose of the workshop is to deliberate on ideas, action plan and processes. He urged the industry to not only bring out the challenges and difficulties in effective implementation of food safety standards but also suggest solutions for improvement.

The special address was given by Mr. V.N Gaur, CEO, FSSAI who welcomed the participants and highlighted the new FSSA Act that had come into force on 5th August 2011, and explained that this Act was the beginning of a long journey to ensure good health of over a billion Indian population through formulation and implementation of effective rules & regulations. He expressed that the food retail chain was the most significant component of the entire distribution network and it was important to understand the requirements in terms of quality and hygiene, at every stage. He also expressed that Identification of requirements and norms was important but effective implementation of these norms was the most challenging task..

Mr. Gaur shared with the audience the steps that have been taken with regard to the FSSA Act namely, that all rules and regulations had been formulated and shared with state governments; state governments had started doing their bit to put the infrastructure into place which in itself was a herculean task. The main issues that the state governments were currently grappling with, were the availability of trained manpower and shortage of adequately equipped laboratories. FSSAI had been supplementing the requirements of state governments specifically with regard to training of personnel and establishments of laboratories. Mr. Gaur also informed that at the central level, FSSAI has plans to establish a new institution wholly dedicated to carry out risk assessment and food science research at the National level.

Mr Gaur further elaborated on Schedule IV of the regulations which touch upon the hygiene practices and expressed that the time has come to disaggregate it a little more and define it clearly with respect to sub segments in food. FSSAI had also been looking to tweaking the set of hygiene requirements to make these more specific to each sub segment. He also informed that the Authority was working on reviewing the existing standards, and the process for the

same had already been finalized. Some of the panels had even started reviewing testing methodologies, etc. One of the areas in which significant progress had been made was in relation to scientific panels and committees with regard to review of standards, and in the last 6-8 months almost 22 meetings of these had taken place.

He laid special emphasis on FSSAI's key approach, which was to promote 'self compliance'. He urged all the stakeholders to ensure self compliance. Further, maintaining transparency was also an aspect on which FSSAI has been continuously focusing.

He concluded by saying that food safety cannot be achieved through enforcement alone and self compliance is the key for success. This can be achieved by increasing awareness- not only of food business operators but also of consumers. Only if the consumer is conscious about quality can food safety for all become a reality.

Ms. Shashi Sareen, Senior Food Safety & Nutrition Officer, FAO delivered the theme address of the workshop. She welcomed the participants and appreciated the efforts of FICCI in bringing together participants from various sectors. She highlighted that earlier quality and safety generally focused on export sector but with globalization and increasing choices available, domestic consumers had become equally demanding due to which there was an increasing need to also focus on domestic markets. Parallely, the governments were also imposing requirements for health and safety in terms of Regulations covering both product specifications as well as system requirements including Food Safety Management Systems covering GAP/GMP/GHP/ HACCP

She further expressed that in retail sector, to ensure delivery of a safe and quality product to consumers, food control and management activities needs to be driven by both the retailers and the government with active involvement of other stakeholders namely producers, processors, transporters, service suppliers, consumers, etc.

Ms. Sareen highlighted that the organized retail sector in India had been rapidly growing. It was currently estimated at USD 450 billion and was expected to grow at 7percent annually over next 10 years – reaching a size of USD 850 billion by 2020. Food retail was expected to more than double to USD 150 billion by 2025. This indicated that organized retail is here to stay. She focused on the need for retailers to be aware of, understand and appreciate the growing consumer awareness regarding food safety and quality and work collectively towards fulfilling it.

Although retailers had been making efforts to put in place norms for their companies, there were problems observed from the consumer perspective which included issues such as expired products on shelves or those close to expiry, non-compliance to labeling regulations,

poor temperature controls on frozen products to the point that even thawed products were seen in retail outlets, no control over quality of branded products. In addition, even the quality of fresh fruits and vegetables was not very good as often old stocks remained on shelves while fresh stocks were mixed with these or placed at the back and by the time these were placed on shelves, these also lost their freshness. Other issues included poor handling of temperature sensitive products like butter, cheese, paneer, fresh milk, chocolates, yoghurt; use of unauthorized treatments such as methyl bromide for fumigation of cereals, carbide treatment for ripening fruits, etc. To improve the practices, it was important that self compliance needs to start early and be emphasized at every stage and existing norms should be implemented ethically.

Ms Sareen gave an overview of some of the approaches in relation to food safety at the International level. These include focus of food control on a preventative systems approach rather than a reactive one based on end-product inspection and testing, implementing the food chain approach in which quality and safety is built through each and every step of the food chain with responsibility of every stakeholder, importance of traceability, the risk-based approach, etc.

Another issue common to most Asian countries is the need for Inter-sectoral coordination amongst various stakeholders. Since there is multi-departmental and multi-sectoral involvement with no single entity involved and accountable for entire food chain, hence there needs to be proper coordination between all the departments at government level and other stakeholders.

Another important approach at International level is the participatory approach. Public private partnership is very important; both parties need to come and work together for effective implementation. Responsibility here is not just of the government but also of the retailers. All the stakeholders need to identify the gaps and work collectively to address them.

Ms Sareen reiterated the objective of the workshop which was to ensure customer confidence in products procured specifically through organized retail by strengthening of the food quality and safety throughout the food chain; and by placing a major responsibility on retailers as being responsible for implementing the systems laid down throughout the food value chain for the products available at their retail outlets. Ms Sareen further elaborated on the structure of the workshop and expected outcome of the workshop, which is to obtain an expression of commitment by all stakeholders towards implementation of a risk-based system across the food chain for ensuring quality and safety of products at retail outlets, discuss the draft norms for retail with respect to food quality and safety and chalk out an action plan/ recommendations for facilitating implementation.

Ms. Sareen in her address also touched upon the various initiatives taken by FAO in SAARC and ASEAN region to address the food safety issues. She specifically mentioned that many of the SAARC countries would be looking at this workshop and its recommendations to follow a similar course in their own countries.

Mr. Mahesh Zagade, FDA Commissioner, Maharashtra welcomed all the delegates and speakers and shared his views on food retail sector. He expressed that retail sector forms a very important part of the Indian economy, not only now but ever since the country has taken the path of economic reforms post 1991. He added that with the changed regime of the FSSA 2006, the importance of the food retail sector had further increased not only because of new Act and Regulations but also because of the international development that had been taking place in the sector.

He expressed that the role of the retailer is very important in the food business as indirectly they control the entire supply chain including farm, processing, transport, storage and the consumer. At the same time, the retailer's role is also that of a regulator in terms of monitoring the products as per safety and quality norms. In his view, soon retailers would be the regulators for the inventory management of the whole food chain.

He also briefed about the food safety standards act and the regulations and emphasized on strengthening the food safety mechanism within the entire food retail chain. He thanked FSSAI, FAO and FICCI for conducting the workshop and highlighting the role of retailers in ensuring food safety.





Session II: Domestic & Global Scenario of Food safety in Retail

4 Domestic & Global Scenario of Food safety in Retail

This session aimed at understanding the best practices of domestic & global retailers for ensuring safety in food retail chain. It also focused on the regulatory infrastructure in place to support the cause of ensuring food safety. The session witnessed the presentations by experts from Thailand and India.

Ms. Jongkolnee Vithayarungruangri, Director, Food Safety Operation Center (FSOC), Thailand

Ms. Jongkolnee Vithayarungruangri, FSOC, Thailand presented the 'Regulatory system in retail supply chain – Thailand Case Study'. She started her presentation with a brief of demographic profile of Thailand and its current retail scenario namely that there are more than 300,000 supermarkets, mini marts and food retails out of which Bangkok alone has 18,240. Thailand declared its National Food Safety policy in year 2003. Thailand ranks seventh in world food market export. In the last three years, the national strategic policy on food safety management has been to strengthen food safety and quality, health, food supply, food security, food education and empowering networking among food authorities. The next plan for year 2012-2015 is to strengthen food safety and quality for consumers of Thailand on the lines of risk based management, integrated implementation, information networking, international cooperation and international food safety best practices promotion in the community. She also talked about the policy directions, where they have strengthened networking with other agencies from 'farm to table' to promote food quality and safety and incident management systems to promote traceability.

She explained that in Thailand, they have harmonized the regulatory Food Act, Drug Act, Feed Quality Control Act, Agricultural Commodities and Food Standards Act, Public Health Act and Consumer Protection Act. These are the laws which regulate the food retail chain in Thailand. A food safety Commissioner is responsible for setting the food safety policy and strategic plan for safe food from farm to table in food supply chain, import, export etc. The main Act is the Food Act that controls the food quality and safety, labeling requirement, nutritional information, etc. Thailand also has a Public Health Act, the role of which is to control the sanitary conditions, and the Consumer Protection Act for consumer rights and information. Any person who wishes to establish any type of food retail chain has to obtain a license from the public health official. The local government has the power to issue local provisions.

Ms Jongkolnee also highlighted the definitions of retail food as covered in the laws and regulations in Thailand and gave in-depth insights on the regulatory framework of Thailand

and the way it is implemented to monitor safety in food retail chains. She also highlighted the campaign projects to cover GMP/GHP/HACCP in food businesses; healthy market projects (in super markets, mini marts and fresh markets); and clean food good taste project in food services including restaurants, hospitals, work place, school canteens, etc. Ms Jongkolnee also highlighted on Food Safety Emergencies and information sharing, food safety information networking and the domestic food alert system for traceability as implemented in Thailand.

Mr. K Radhakrishnan, President, Future Fresh Foods

Mr Radhakrishnan presented his views on 'Current systems & practices in India to ensure quality and safety in food retail'. Giving his perspective from a retailer side, he expressed concern regarding the lack of seriousness about food safety issues within the industry. According to him there is lack of communication between the makers of regulations, people who use it i.e. industry and the final consumer who is the ultimate beneficiary.

Giving an overview of the FSSA Act, he raised some concerns over certain provisions of the Act in relation to retailers. For eg, the retailers' role in food safety should be judged by the capability of being able to examine 8000 products every day for safety norms. However it is impossible for the retailer to completely examine the contents even on a sampling basis. In his view, in the whole Act, the Labeling norms are of the highest degree of Importance for a retailer.

Mr. Radhakrishnan explained the retailer's role in implementing food laws wherein he highlighted that products sold by the retailer are of two types; products that are not produced but only sold by the retailer and products that are produced and/or packed by the retailer. Regarding products only sold by retailer, the retailer deals only with suppliers having a food license, and gets a blanket indemnity for liability from the manufacturer or supplier. The retailer needs to ensure that the products conform to the Packaging Commodities Act and the PFA/FSS Act. The requirements of the former are relatively easy to ascertain, by physically examining the package at the time of arrival of the products at the warehouse, while it is difficult to ascertain compliance of the products to the PFA Act as the same require testing.

Mr. Radhakrishna stressed on the fact that Indian retail industry is highly fragmented where only 5% is organized. Hence this 5% only would be liable for any violation along with the manufacturing units. He expressed that food safety starts from the primary production level and to ensure food safety, it is important to control the entire food chain to cover farm, procurement, processing, transportation and handling and storage and sales. He suggested that to govern the remaining 95% unorganized segment, there is a need to start with voluntary standards. More awareness about the importance of food safety is required not only amongst the consumers but also the producers of food. He highlighted on the specific

aspect of contamination in the meat supply chain due to temperature abuse. The importance of enforcement was also highlighted.

Mr. Radhakrishna concluded by giving few key recommendations for the effective implementation of food safety laws wherein he focused on two approaches to address the issue; voluntary implementation by retailers and enforcement by the government:

- **Voluntary:** Every food company must acknowledge its own responsibility and the need to comply with and implement food safety standards.
- **Enforcement :**
 1. The law needs to be simple and unambiguous
 2. Standards should be harmonized and unified as per international norms but customized to Indian conditions.
 3. A responsive and non-corrupt surveillance and enforcement system for ensuring their effectiveness should be in place.
 4. Punishments for violations need to be severe
 5. Availability of State-of-the-art support Infrastructure-such as well equipped laboratories, cold storages, etc should be in place to support safe and quality products

Ms. Pornpen Nartpiriyarat, Head of Trading Law and Technical, TESCO LOTUS, Thailand

Ms. Nartpiriyarat through her presentation 'Managing Food Safety and Quality in Retail Chain' gave an in-depth insight on how TESCO in Thailand is working towards ensuring food safety in retail. She gave an overview of the history of TESCO Lotus and the strategy and values of the company. She informed that they had 134 Hypermarkets, 126 Talads, 640 Express stores and 4 Distribution Centres. They had 36,000 manpower and serviced more than 50, 000, 00 customers per month. More than 50,000 items were being sold in their stores of which more than 8,000 items are own label products.

She commented that India and Thailand are not too different from each other in terms of issues and problems regarding food safety. Hence India can take learning from the way TESCO LOTUS has been operating.

Focusing on how TESCO manages food safety & quality, Ms. Nartpiriyarat elaborated on four aspects namely quality control at primary site; temperature management and proper quality control for manufacturing and storage; clean, cool and product specification control; and

proper display and storage as follows:

- 1) Farm management/Farm approval: This process incorporates an understanding of local/ international Standards, conducting technical audits and ethical audits, traceability, providing technical training, metal control, ensuring hygiene and record keeping and ensuring continuous development.
- 2) Product Management: It lays focus on product development, specification, labeling requirements, nutrition adherence, shelf life testing, product testing with customer which is a sort of self monitoring initiative, product surveillance, consumer complaint (or TESCO customer feedback is an integral part of their operations), product withdrawal and recalls.
- 3) Cool Chain Management: This process is a very important piece to recognize. Certain temperature specifications have been laid down for perishables which are as follows:
 - Meat / Seafood: 0 – 4°C (Entire supply chain); Frozen: – 25 °C (Entire supply chain); Leafy Vegetable: 12 °C; Local Fruits: 20 °C (This is in blueprint-recommended but not approved as of now)
- 4) Store and Distribution Management: It is composed of store and DC audits which help in understanding the areas of improvement and subsequently investing in the capability improvements. Further the process involves backroom management, preventive maintenance, temperature control and waste management.

TESCO also lays heavy focus on the training of their technical team and manpower to ensure their efficiency in working towards managing food safety & quality.

Overall her presentation gave a comprehensive insight on TESCO best practices to manage food safety & quality. She highlighted that safety and quality in retail is a journey and some key points of focus are: recognize not everybody starts at the same level; continue to invest in training and coaching; work shoulder to shoulder with suppliers; as their success is our success. Ms Pornpen concluded with the message that by understanding their entire process, India can derive important learnings that can be replicated.

Dr. J. P. Dongare. Food Safety Standards Authority of India (FSSAI)

Dr. Dongare gave a detailed presentation on '**Existing food regulatory / voluntary systems in retail supply chain in India**'. During his talk he gave an overview of Indian scenario in terms of India being one of the world's largest food producers, second largest producer of fruits (46.64

million tonnes) after Brazil, second largest producer of vegetables (78.19 million tonnes) in the world, next to China. At the same time India accounts for a total of 13 percent of world's production. There are certain challenges in ensuring food safety which include consumer's demand of improved quality, suitability and effective enforcement actions to check adulteration, etc.

He added that the Food Safety and Standards Act (FSSA), 2006 has the mandate to consolidate the laws relating to food, laying down science based standards for articles of food to regulate their manufacture, storage, distribution, sale and import of food and ensure availability of safe and wholesome food for human consumption.

The most salient feature of the Act is to ensure that all food meets consumers' expectations. The Act is there to provide legal powers and specify offences in relation to public health and consumers' interest and aims to shift from regulatory regime to self compliance gradually. FSSAI also has the mandate to specify the standards for novel food, dietary supplements, nutraceuticals, etc. The Regulation of food imported in the country has already been drafted. The Act also has the provision of food recall. The Authority is further working to develop a robust surveillance mechanism system. The new enforcement system has already been notified under which in every district there will be a designated officer and with every designated officer there will be a food safety officer. At the state levels, there will be food safety commissioners to ensure food safety from farm to fork. The Authority also envisages a large network of food laboratories, new justice dispensation system for fast track disposal of cases and harmonizing domestic standards with international food standards.

Dr Dongare further elaborated that the function of the Authority is not only to regulate and monitor the manufacture, processing, distribution, sale and import of food but also to ensure its safety and wholesomeness to specific standards and guidelines for food articles. Limits for food additives, contaminants, veterinary drugs, heavy metals, mycotoxin, irradiation of food, processing aids have already been prescribed. There are mechanisms and guidelines for accreditation of certification bodies engaged in FSMS certification. The Authority is also providing the scientific advice and technical support to central and state governments.

After describing detailed functions of the Food Safety Authority of India, Dr. Dongare emphasized that while at the national level when the Authority is drafting the standards for food retail, it is important to consider both the organized retailers and kirana shop operators. The standards need to be prescribed in such a way that can be achievable by the organized food retail chain operators and as well as kirana store operators. The aim of the workshop is also to identify the need for any change in the existing regulations and the Authority is open to accept the suggestions from the food retail sector.

He further elaborated on few identified regulatory compliances required by food retail operator, such as:

- FSSAI License for store including shop in shop activities;
- Calibration and regular stamping of all balances by LEGAL METROLOGY Department, Checking weighing balances daily using standard weights to ensure correctness of weights and maintaining records ;
- Products meeting all labeling requirements as prescribed under FSSAI Act;
- No misbranding/adulteration of product during storage/sale;
- No product to have double MRP or sold at higher than MRP;
- No child labour employed;
- Fire safety clearance;
- No objection certificate (NOC) (by local municipal authority) under Shop & Establishment Act.

He also elaborated on the requirements laid down in FSSAI regulations Chapter 3-Schedule IV Part II:

- Sanitary and hygienic standards and worker's hygiene to be followed and implemented as specified in Schedule – 4 of the regulations;
- Daily records of production, raw materials utilization and sales maintained in a separate register;
- Source and standards of raw material used to be of optimum quality;
- Premises for manufacture, storage, exposure for sale of food to be well separated from any privy, urinal, silage, drain, storage area for foul/waste matter;
- The testing of all relevant chemical and microbiological contaminants in food products to be carried out through establishments own or NABL/FSSAI recognized labs at least once in six months;
- Required temperature conditions to be maintained throughout the supply chain from the place of procurement/sourcing till the consumer end including during transportation, storage etc.
- The food products to be bought/sold by the manufacturer /importer / distributor only from or to licensed/registered vendors and records maintained; and
- A form of Guarantee (Form E) to be attached along with all the invoices stating that *“I/we hereby certify that food/foods mentioned in this invoice is/are warranted to be of the nature and quality which it/ these purports/ purported to be”*.

Further, Dr. Dongare added that there are regulations for packages that retailers should be aware of. For example all containers should be securely packed and sealed, exterior of the cans should be free from rust, dents, perforations and seam distortions, no leaks, etc.

There are also detailed labeling requirement that retailer should be aware of. For example, the label should not carry a false, misleading or deceptive description or presentation of the prepackaged food and the labeling should not create an erroneous impression regarding the character of food in any respect.

He also highlighted the specific provisions that are required to regulate retail food supply chain, namely

- The retailer shall have an internal audit system in place in relation to all systems, procedures and activities, which are critical to product safety.
- The retailer shall ensure that any product, which does not conform to requirements (regulatory and consumer safety), is clearly identified and controlled to prevent unintended use or delivery. These activities shall be documented and implemented.
- All externally sourced items whether branded, 'own Label', fruits & vegetables, animal products, etc shall meet the statutory requirements. The retailer shall ensure that all materials are invoiced to carry a declaration of vendor in form E of FSS Regulation.
- Effective procedures, documentation and systems shall be in place to ensure traceability.
- An effective incident management procedure for all 'own-brand' products as well as branded products shall be implemented, which needs to be tested regularly. This should cover both product withdrawal and product recall (as applicable).

With this presentation Dr. J. P. Dongare emphasized that the retail food safety management applies to entire retail food supply chain and there is need for system operating procedures from primary processing centers to grading, sorting of cereals, fruits and vegetables, warehousing & distribution centres, transportation till the retail store. GMP shall be followed during processing & packaging of food products to ensure safety in food retail chain.



Interactive Session Highlights

5 Interactive Session Highlights

An interactive session was held in which the participants were asked to give suggestions/ comments on the following:

- Draft norms for retail with respect to food safety and quality as circulated
- Identification of gaps
- Laying down the action Plan
- Roadmap for implementation – Strategy & Methodology

The session was moderated by Ms Shashi Sareen and Mr V.N Gaur. Based on the issues raised, comments and suggestions, the following aspects were highlighted:

i) Draft norms – Draft norms for implementation by retail sector were modified based on suggestions received. These are given in Annex 2. However, it was acknowledged that the norms would be effective only when there is an efficient support infrastructure in place. For this all the stakeholders need to come and work together to ensure the availability of safe food for the end consumer.

ii) Building Awareness – Awareness is important at various levels – consumers, producers and retailers in cities as well as rural areas, government, farmers, etc.

Consumer: Any guidelines/regulations will not be effective unless the consumer - the ultimate beneficiary demands food safety. While making purchases, the consumer should be well aware of what exactly he has to look for in labels. Campaigns like 'Jaago grahak jaago' have been effective and such programs should be developed on food safety and further promoted to educate consumers.

Retail associations, Industry and the Government need to support the designing of specific consumer awareness modules and come out with a whole publicity campaign for promotion through various media channels. Industry Associations and Chambers and consumer organizations would need to support such initiatives to facilitate publicity campaigns through organizing seminars, and other capacity building programs wherein consumers could be educated on the need of food safety and the responsibilities entrusted with the manufacturers and retailers to ensure safety.

An aware and educated consumer would also lead to the improvement in the efficacy of big and small retailers in terms of delivering safe and quality food.

Manufacturers & Retailers: It was noted that the issue of food safety and quality does not receive due attention from the top level decision makers of the organizations while framing company policies. Sensitizing programs for the senior executives and top management of the

manufacturing and retail companies to highlight the significance of food safety issues across the value chain is crucial for effective implementation of the process.

iii) Including food safety in educational curricula - As a primary step to spread awareness and importance of hygiene & safety, the topics on food safety should be included in the academic syllabus of educational institutes. Government has already introduced chapters on hygiene and safety in NCERT course books. This need to be further broad-based and included in higher education, not merely in the food technology institutes but also in the medical courses and agriculture universities.

iv) Implementation of APMC Act by all states

The draft guidelines envisages effective and appropriate procedures and systems are in place to ensure traceability with respect to

- Identification of any out-sourced product, ingredient or service;
- Complete records of batches of in-process or final product and packaging throughout the production process, as necessary.
- Record of purchaser and delivery destination for all products supplied.

However, in case of 'Fruits & Vegetables', sorting & grading cannot be ensured on account of sourcing fruits and vegetables from mandis in many states which are not amending the APMC Act for Direct farm sourcing.

Similarly an 'Integrated crop management' or equivalent system for judicious use of chemicals during growing and post harvest treatment and to control residues within the prescribed MRL's can be implemented only in case of sourcing from direct farms and not from mandis in states where APMC act does not allow direct farm sourcing.

Thus to address these issues, it is of utmost importance that there is early implementation of APMC Act by all the states in letter and spirit.

v) Building efficient Infrastructure: Efficient infrastructure in terms of laboratories, slaughter houses and veterinarians, cold store facilities, adequate storage and transportation facilities are absolutely essential and need focus.

- **Food Testing Laboratories:** Currently there is lack of strong laboratory network across the country as compared to the size of food and food retail industry. It is imperative that there are sufficient numbers of well equipped laboratories for testing and these should be capable of testing various parameters within a reasonable time for example testing of pesticide residue limits. It was suggested that for every 10 districts at least one laboratory should be there which could test pesticide residues, antibiotic residues, microbiological parameters, etc. The concept of laboratory networking is important so that testing facilities of various departments as well as private sector are efficiently utilized.

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- **Need for sufficient Government slaughter houses / veterinarians:** In some of the state districts government slaughter houses are not available and in others local authorities have not appointed veterinarians for ante / post mortem inspections and issuance of slaughter tickets. It thus becomes difficult to comply with regulations regarding safety of meat in such areas.
 - **Controlled temperature facility:** There is a lack of controlled ambient temperature and chilling facilities for carcass / meat at government slaughter houses, during transportation, etc. Such infrastructure facilities are important to maintain the cold chain.
 - **Storage and Transport:** Given the geographical conditions, diversity of the crops and huge distances, the current facilities with respect to logistic and supply chain is still minimal. More investment in infrastructure is required to reap the advantages that nature and recent development in the agricultural sector has provided. Due to lack of storage capacity and transportation, there are huge wastages. This problem needs to be suitably addressed.

vi) Harmonization of Laws and Coordination between the Ministries:

- Harmonization of requirements under various Laws is essential. FSSAI regulating the Food Safety and Standards Act and Ministry of Consumer Affairs dealing with Legal Metrology Act both have a separate set of labeling norms which are not fully harmonized. The departments should work towards harmonization of the norms. It was also suggested to bring out a consolidated labeling guideline for assistance to retail sector
- Coordination between Ministries and Departments of the government was recognized as important in ensuring food safety across the food chain. Each Ministry has its own role, but coordination is essential. For example in the case of horticulture products, once specific chemicals are banned, the Agriculture Ministry to be involved to take care of the primary production side; while Health Ministry ensures the usage in the processing sites and market place. It was also agreed that all relevant ministries should work towards providing real time information on the issues that may impact others, so that all stakeholders may contribute to achieve the objective of the cause.

vii) Publications

It is important to have information on food retail for which a food retail newsletter may be published. It is also useful to bring out information on non-compliance of products sold in retail or also on retailers not complying with regulations. This may be through a column on findings of Non-compliances in retail sector inserted in the newsletter. Inputs may come from government/ consumer organizations/ industry associations/ chambers based on testing of products/ stores checks to see if norms are being maintained and the findings published.



Key Recommendations

6 Key Recommendations

The key recommendations of the workshop along with responsibilities were identified as below. It was also agreed to request FAO for support as needed in specific areas.

Key Recommendations

1) Draft Norms

- The draft norms for the retail sector developed and modified based on comments received from retailers to be considered by FSSAI for adoption (see Annex 2).

Action: FSSAI

2) Building Awareness

- **Consumer:** Consumers should be made aware of importance of food safety and what they need to look for in labels. Campaigns and programmes like 'Jaago grahak jaago' should be developed promoted to educate consumers on food safety issues.

Retail associations, Industry Associations/ Chambers and the Government to work collectively to design specific consumer awareness modules and develop a publicity campaign for further implementation of the same through various means. Industry Associations and Chambers and consumer groups to support such initiatives to facilitate publicity campaigns through seminars, and other capacity building programs.

Action: FSSAI and FICCI to lead

- **Manufacturers & Retailers:** Sensitizing programs for the senior executives and top management of the manufacturing & retail companies highlighting the significance of food safety issue and educate them on the guidelines to be followed for effective implementation of the process to be organised.

Action: FICCI

- **Government:** Sensitizing programs for the central and state government officials to highlight the significance of food safety issue and educate them on the guidelines to be followed for effective implementation of food safety across the food chain as well as the norms for retail to be organised.

Action: FSSAI

- **Rural areas:** Education on the importance of hygiene and the need to have safe food may be provided with help of NGOs.

Action: FSSAI & FICCI

3) Promoting Education on Food Safety

- The topics on food safety to be included in the academic syllabus of educational institutes in higher education, including in the food technology institutes, medical courses and agriculture universities. A recommendation to this effect may be sent to NCERT.

Action: FSSAI & FICCI

4) Implementation of amended APMC Act by all states

- States that have not amended the APMC Act for direct farm sourcing of fruits & vegetables need to amend the same so that retailers can source directly from farms and thereby ensure quality and safety. States need to be explained the importance of implementing the amended APMC Act.

Action: FSSAI & FICCI

5) Building efficient Infrastructure:

- **Food Testing Laboratory:** A laboratory networking system to be worked out and made available to the retail value chain with capability of testing pesticide residues, microbiological, antibiotic residue testing, etc.

Action: FSSAI & MOFPI

- **Need for sufficient Government slaughter house / veterinarians:** Government slaughter houses to be set up in state districts as needed. Local authorities to appoint veterinarians for ante / post mortem inspections and issuance of slaughter tickets in districts where the same are currently not available.

Action: FSSAI & MOFPI

- **Controlled temperature facility:** The possibility of establishing controlled ambient temperature and chilling facilities for carcass / meat at government slaughter houses to be explored to ensure that products are kept in a chilled condition at all times thereby ensuring safety.

Action: FSSAI & MOFPI

- **Storage and Transport:** Logistic and supply chain infrastructure to be strengthened to reduce the huge wastages due to lack of storage and transport. This problem needs to be appropriately addressed.

6) Harmonization of Laws and Coordination between the Ministries:

- Coordination between different departments especially in relation to retail to be

strengthened. All relevant ministries should work towards providing real time information on the issues that may impact the safety of food retail.

Action: FSSAI

- Labeling norms under the Food Safety and Standards Act and the Legal Metrology Act to be harmonized.

Action: FSSAI & Department of Consumer Affairs

- A consolidated labeling guideline for assistance to retail sector to be published

Action: FICCI

7) Publications

- A food retail newsletter may be published which may include a column on findings of non-compliances in retail sector with inputs from government/ consumer organizations/ industry associations/ chambers based on testing of products/ stores checks to see if norms are being maintained.

Action: FICCI

Steps taken by FSSAI towards improvement of safety in food retailing:

1) Draft Norms

- FSSAI may consider specifying the regulations as PART under Schedule 4 of Licensing & Registration Regulation

2) Building Awareness

- FSSAI has initiated the action to educate consumers with the help of NGOs (Concert) on aspects of food safety
- FSSAI has already taken up the media (Print, audio-video) campaign
- Industry associations alongwith Retailers Association of India (RAI) have already started conducting workshops for retailers
- FSSAI is conducting Orientation programmes for Central & State Govt. officials for above purpose
- FSSAI has initiated the action to educate consumers with the help of NGOs (Concert) on aspects of food safety

3) Promoting Education on Food Safety

- A meeting was held on 8 December 2010 under the Chairmanship of CEO, FSSAI with representative of NCERT, CBSC, Central Health Education Bureau and Ministry of

Women and Child Development, it was decided that IGNOU may suggest the changes wrt food safety elements to be incorporated in the curriculum of class 1-10.

4) Implementation of amended APMC Act by all states

APMC Act is being implemented by Directorate of Marketing & Inspection under Ministry of Agriculture

5) Building efficient Infrastructure

- FSSAI has initiated action to establish appropriate laboratory network across the country with the help of NABL accredited laboratories and also up-gradation of existing laboratory infrastructure with the help of MFPI grant-in-aid schemes
- FSSAI may consider specifying the regulations as PART under Schedule 4 of Licensing & Registration Regulation
- Infrastructure development of slaughter houses with appropriate requirements may be roped in with MFPI scheme of financial assistance to local bodies under the scheme of “Modernization of Abattoirs”.





Annexures

Annex I: Program of the Workshop

Programme of Workshop on **'Improving Safety & Quality in Food Retail Chain'**

14 December, 2011

Hilton Hotel, Sahar Airport Road, Andheri (East), Mumbai

10:00 am – 10:30 am	Registration
10:30 am – 11:15 am	Session I: Inaugural <ul style="list-style-type: none"> • Welcome: Mr. Sameer Barde, Assistant Secretary General, FICCI • Introductory remarks: Shri V.N Gaur, CEO, FSSAI • Theme Address: Ms. Shashi Sareen, Senior Food Safety & Nutrition Officer, FAO
11:15 am – 11:30 am	Networking Tea Break
11:30 am – 1:00 pm	Session II: Domestic & Global Scenario of Food safety in Retail <ul style="list-style-type: none"> • Thailand's regulatory system to ensure quality and safety in retail supply chain Dr Napapan Nanthapong, Bureau of Food and Water Sanitation, DoH, Ministry of Public Health, Thailand and Jongkolnee Vithayarungruang Sri, Director, Food Safety Operation Center (FSOC) • International scenario of food retail sector with specific emphasis on quality & safety: Ms Pornpen Nartpiriyarat, Commercial Director, TESCO, Thailand • Current systems & practices in India to ensure quality and safety in food retail • Existing food regulatory/voluntary systems in retail supply chain : Dr. Jitendra Dongare, FSSAI • Discussions
1:00 pm – 2.00 pm	Networking Lunch
2:00 pm – 4.00 pm	Session III: Interactive working group Session Moderated by: Ms. Shashi Sareen, FAO <ul style="list-style-type: none"> • Discussion on draft norms for retail with respect to food safety & quality • Identification of gaps • Laying down the action Plan • Roadmap for implementation Strategy & Methodology
4:00 pm – 4:15 pm	Tea Break
4:15 pm – 4:45 pm	Conclusion: Final Recommendations

Annex II: Draft Retail Norms

0. Foreword

The basic activities in retail cover the following

- i. Fruits & vegetables procurement and their sorting, cleaning & transportation at various stages till the point of sale at front end
- ii. Staples sorting, cleaning, fumigating, grading and packing at own 'Reprocessing Centres' or at third Party Service Providers
- iii. Processed Food, Private Labels or Own brands manufacturing/ processing through contract manufacturers
- iv. Supply chain including warehousing cold chain etc.
- v. Front end retail activities including shop in shop
- vi. Eateries/restaurants/milling/bakery, preparing & packing cut fruit & vegetables, wine shops, non-veg meats/ fish, etc.
- vii. Fresh non veg (shop in shop or stand alone)
- viii. Disposal of unsold /non conforming /rejected commodities

1. Scope – This document covers the minimum retail practices to be implemented throughout the supply chain to ensure availability of right quality and safe products at the point of sale to consumer. The document is basically oriented to cover food product. The document is applicable to large as well as small retailers and covers the entire supply chain as applicable to the retailer.

2. Requirements – The basic requirements for each of the activities in retail are given below. The general requirements as applicable to all facilities and activities (i.e. fruits & vegetable grading & sorting Centre, Staples reprocessing Centre, Distribution Centres/ Warehouses, Stores) are given under 2.1, while activity wise areas which need special focus are given under 2.2.

2.1 General Requirements for all facilities & activities

The general requirements as given below for ensuring food safety shall be complied with as relevant to the activity. Requirements are covered under two heads namely:

- i) Good Manufacturing Practices (GMP)/ Good Hygienic Practices (GHP)/ Good Agriculture Practices (GAP)/ Good Distribution Practices (GDP)

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- ii) Food Safety Management Systems requirements

2.1.1 Key Elements: GMP/ GHP/ GAP/ GDP

2.1.1.1 Facility Environment

The site or facility shall be located and maintained so as to prevent contamination and enable the production of safe products.

Surroundings shall be clean with no garbage accumulation, no excessive flies/ rodents and no accumulation of stagnant water near site and no open sewage line

2.1.1.2 Facility Layout and Product Flow

Premises, site and/or plant shall be designed, constructed and maintained to control the risk of product contamination.

Layout shall be clear. Product flow, as far as possible, should be uni-directional without criss-crossing. There shall be adequate separation between storage areas (raw material, packaging material, finished goods, rejected/ accepted materials, etc), processing area, packing area, utility area etc.

There should be provision of appropriate loading and unloading points which facilitate movement of material and suitably covered to provide adequate protection from pests, rain, etc.

2.1.1.3 Fabrication (raw material handling, preparation, processing, packing & storage areas)

The fabrication of the site, buildings and facilities shall be suitable for the intended purpose with specific attention to the following:

- a) Flooring shall be smooth, impervious, with no crevices or damages. Floors shall be constructed to allow for adequate drainage.
- b) Roof shall be gap free, water resistant, and finished so as to minimize build up of dirt and shedding of particles.
- c) Walls and partitions shall have a smooth surface. Wall paint shall not be flaking off. There shall be no crevices to harbour pests.
- d) Windows and Ventilators shall be easy to clean, and where necessary fitted with cleanable mesh which shall not be cut or damaged to allow insects. Preferably glasses

on window shall be avoided, if used shall be shatter proof or protected to ensure that food is not contaminated by breakages.

- e) Doors shall be smooth and non absorbent and be easy to clean and disinfect as appropriate. Entry/exit points shall be suitably fitted with measures such as Strip PVC /air curtains/ wire mesh doors / doors with self closing devices etc as appropriate to ensure dust, insects, birds, animals are kept out.
- f) Storage facilities and storage shall be adequate to the operations to maintain a safe product.
- g) Drainage systems as relevant to the operations shall be appropriately designed and constructed. The sewage discharge shall comply with the requirements of Pollution Control Board. Drains, if any, in the operations area shall be made of impervious rust proofing material and shall be covered. These shall have adequate trapping devices to avoid entry of pests. Drains shall allow for effective cleaning as relevant. They shall not allow any stagnation or backflow of water.
- h) Temperature controls both for operations and environment, as necessary, shall be maintained to ensure the safety and suitability of food.
- i) Ventilation, either natural or mechanical, as appropriate to the food and the operations shall be provided for minimizing air borne contamination, controlling ambient temperatures and humidity, as necessary, which might affect the safety and suitability of food.

Ventilation systems shall ensure that air does not flow from unclean to clean areas. These shall be adequately maintained and cleaned.

- j) Lighting, natural and / or artificial shall be provided in premises for various operations and other activities within the facility (eg sanitary conveniences). The intensity of lighting shall be adequate on the nature of operations (eg sorting, cleaning, grading, inspection and testing require greater intensity of light). Where necessary, lighting should be such that the resulting colour is not misleading.

Lighting fixtures shall especially where food or food contact surface is exposed to open), be shatter proof or protected with shatter-proof covers to ensure that food is not contaminated by breakages. The fixtures shall be designed to avoid accumulation of dirt and be easy to clean.

- k) Power Back up - Suitable power back up facilities e.g. generators, invertors etc shall be provided to ensure uninterrupted supply as necessary for production/ maintenance of safe food.

Fire Protection – Suitable fire protection equipment shall be there which shall be functional and within its shelf life.

2.1.1.4 Equipment

Equipment and re-usable containers coming into contact with food shall be suitably designed and constructed for the intended purpose so as to minimize food safety risks. Equipment shall be located so that it permits adequate maintenance and cleaning; facilitates good hygienic practices, including monitoring, if required.

It shall be ensured that equipment is adequately cleaned, disinfected where necessary, and maintained to avoid the contamination of food. Where necessary, equipment should be movable or capable of being disassembled to allow for maintenance, cleaning, disinfection, monitoring, etc.

A system of planned maintenance shall be in place covering all items of equipment, which are critical to product safety. Maintenance programmes shall cover maintenance schedule, responsibilities, methods, tools and gadgets, etc. Appropriate records shall be maintained. Consumables like greases and lubricants that come in contact with food shall be food grade. Spares shall be non toxic, *non*-reactive and impervious.

Pallets shall preferably be made of plastic. However, in case wooden pallets are used, these shall not have any signs of infestation (fungus, termites, etc). Records of any antifungal /anti-termite treatment done shall be available.

2.1.1.5 Staff Facilities

Staff facilities shall be designed, and should be operated, so as to minimize food safety risks. These may include the following as appropriate:

- a) Adequate means of hygienically washing and drying hands, including wash basins and supply of adequate water of potable quality (complying with IS 10500). Taps may need to be non-hand operated, depending on the nature of operations;
- b) Toilets/ lavatories of appropriate hygienic design at suitable location with adequate natural or mechanical ventilation and natural or artificial lighting;
- c) Adequate changing facilities for personnel, as appropriate to the operations.

2.1.1.6 Physical, Chemical and Biological Contamination Risk

Appropriate facilities and procedures shall be in place to control the risk of physical, chemical, or biological contamination of product. Appropriate controls should be in place to minimize incidence of foreign bodies, e.g. by the use of effective detection or screening devices (such as filters, sieves, magnets or metal detectors).

2.1.1.7 Segregation and Cross-contamination

Procedures shall be in place to prevent contamination and cross-contamination of raw materials, packaging and finished product, covering all aspects of food safety including micro-organisms, chemicals and allergens.

2.1.1.8 Stock Management (rotation)

Procedures shall be in place to ensure materials and ingredients are used in the correct order and within the allocated shelf life.

2.1.1.9 Housekeeping, Cleaning and Hygiene

Appropriate standards of housekeeping, cleaning and hygiene shall be maintained at all times and throughout all the stages.

Cleaning and housekeeping programmes as appropriate shall be in place which shall cover cleaning and housekeeping schedule, responsibilities, methods, equipment and cleaning and sanitizing aids, etc to effectively control contamination. These shall be continuously monitored for their effectiveness. It shall be ensured that cleaning and sanitizing chemicals do not contaminate food.

2.1.1.10 Water Quality Management

The quality of water (including ice & steam) that comes into contact with food, food contact surfaces or hands shall be potable and regularly monitored to ensure that it does not present a risk to product safety. Water for post harvest washing shall be potable. Potable water shall be checked for contaminants at an appropriate frequency.

Water pipes & storage tanks shall be made of material that is non toxic, corrosion resistant, free from cracks, impervious and shall be sealed. These should be maintained in good condition and order at all times to prevent leakage or defects that would result in contamination of food. Water storage tanks for potable water should be regularly cleaned and disinfected to prevent contamination.

2.1.1.11 Waste Management

Adequate systems shall be in place for the collation, collection and disposal of waste material.

Waste shall not accumulate in processing/ storage areas. Waste bins and areas shall be identified, covered and kept appropriately clean. Containers for waste, by-products and inedible or dangerous substances, suitably

constructed and where appropriate made of impervious material. Those used to hold dangerous substances shall also be lockable and access restricted to authorized personnel.

2.1.1.12 Pest Control

Suitable pest control programmed shall be in place for controlling or eliminating the risk of pest infestation on the site or facilities including vehicles. The pest control programmed shall identify the pests to be controlled, the area / locations where control is to be applied, the method of control egg physical, chemical etc., the dosage in case of usage of chemical, schedule, responsibilities, etc. These shall include use of insectocutors, traps and baits as appropriate. (Rodent traps, when used, shall be in sufficient numbers and be mapped. Insectocutors, when used, shall be functional & collection tray cleaned at regular intervals.)

The pest control activities shall be performed by trained and authorized personnel. These shall be continuously monitored for their effectiveness to ensure there are no signs of pest infestation including flies, cockroaches, lizards, rats, etc. Updated records & pest control contracts' shall be available at site. It shall be ensured that pest control chemicals do not contaminate food.

The measures shall be documented and records maintained.

2.1.1.13 Veterinary medicine (GAP only)

A system shall be in place to ensure utilized drugs shall be appropriate to their purpose and do not exceed permitted MRL's.

2.1.1.14 Pesticide, Herbicide and Fungicide Control (GAP only)

An Integrated Crop Management or equivalent system shall be in place for the judicious use of chemicals during growing and post harvest treatment and to control residues within the MRL's prescribed under the FSS (Contaminants, Toxins and residues) Regulations, 2011

2.1.1.15 Transport

All vehicles, including contracted out vehicles, used for the transportation of raw materials (including packaging), intermediate/semi processed product and finished product shall be suitable for the purpose, maintained in good repair and be clean. The design and construction of transportation or transport containers should be such that they do not contaminate food (Including ingredients) or packaging material.

Food shall be adequately protected during transport to assure food safety. Food and non-food should be suitably segregated during transportation. Where foods are transported after the transportation of chemicals or other non-foods, effective cleaning or where needed disinfection shall be carried out between the loads.

The temperature, humidity, atmosphere and other necessary conditions, as appropriate to the product shall be maintained. In case of transportation of fruits/ vegetables, the vehicles should have suitable ventilation. In case of transportation of chilled or frozen products, the vehicle should have facilities to be able to maintain suitable temperature conditions and have adequate temperature monitoring devices. In case of cut fruits and vegetables 4 to 8 oC can be maintained.

2.1.1.16 Personal Hygiene, Protective Clothing and Medical Screening

Documented hygiene standards based on risk of product contamination shall be in place. Hand washing and toilet facilities shall be provided. Hands shall be washed with soap/ disinfectant after use of toilets; and after touching any contaminated material (including raw material, money, files etc) or unclean product / food contact surface / body parts especially if dealing with exposed foods. No spitting, smoking, eating food and paan chewing shall be permitted in the operations areas.

Suitable and appropriate protective clothing shall be provided and worn. Personnel while working in an area where exposed food is handled shall maintain a high degree of personal cleanliness and shall wear clean uniform and head gear/cap, wash hands regularly. They shall not wear loose or hanging jewellery, glittering clothes, glass bangles, rings, watches, and carry mobile phones. Nails shall be trimmed, kept clean and without nail polish.

Personnel Hygiene practices in simple local language / language understood by the personnel/pictorial shall be suitably displayed at appropriate places.

A medical screening procedure shall be in place to include:

- a) Checking of personnel likely to come in contact with food for communicable and infectious diseases on joining and once in year.
- b) Personnel likely to come in contact with food not have any open cuts or wound/injury, contagious disease, or sickness such as Jaundice, Diarrhoea, fever, skin allergy etc.

In all cases this (protective clothing, personal hygiene and medical screening) shall also apply to contractors and visitors.

2.1.1.17 Training

A system shall in place to ensure that all employees involved in food handling are adequately trained, instructed and supervised in food safety principles and practices, commensurate with their activity. This shall also include induction training.

Trainings shall be held at required frequencies but at least once in 6 months and records of the same maintained.

2.1.2 KEY ELEMENTS: FOOD SAFETY MANAGEMENT SYSTEMS

2.1.2.1 Management Commitment & Responsibility

There shall be a clear commitment by the retail Management towards food safety. A clear organizational structure, which defines and documents job functions, responsibilities and reporting relationships of at least those persons, whose activities affect product safety.

2.1.2.2 Documentation & Records

- a) Documented procedures for various processes and operations having an effect on product safety as relevant to the activity shall be available and implemented.
- b) Appropriate records as applicable to the activity in relation to process, storage, transportation and distribution shall be kept and retained for a period that exceeds the shelf life of the product. These shall be effectively controlled and readily accessible when needed. At a minimum, records for the following processes shall be maintained ;

- Incoming material checks
- Inspection and test
- Temperature and time
- Product recall and traceability
- Storage
- Cleaning and sanitation, as appropriate
- Pest control
- Medical and health
- Training
- Regular process & facility audit(internal)
- Calibration/ verification

-
- Non conforming product
 - Waste disposal

2.1.2.3 Specifications

Specifications shall be defined for all items and services including utilities, transport and maintenance purchased/provided and having effect on product safety. These shall cover compliance to regulatory and statutory requirements. These specifications shall be based on sound scientific principles. The specifications shall be readily accessible and shall be reviewed periodically.

2.1.2.4 Internal Audit

The retailer shall have an internal audit system in place in relation to all systems, procedures and activities, which are critical to product safety.

2.1.2.5 Corrective Action

The retailer shall have documented procedures for the determination and implementation of corrective action in the event of any significant non-conformity relating to product safety covering all activities.

2.1.2.6 Control of Non-conformity

The retailer shall ensure that any product, which does not conform to requirements (regulatory & consumer safety), is clearly identified and controlled to prevent unintended use or delivery. These activities shall be documented and implemented.

2.1.2.7 Purchasing (procurement/ sourcing)

All externally sourced items whether branded, Own Label, fruits & vegs, animal products, etc shall meet the statutory requirements. SOPs shall be documented to cover the same. The retailer shall ensure that all material invoiced to carry a declaration of vendor on Form E certifying the foods supplied are of the nature and quality as purported wrt health and safety.

The retailer may approve and continually monitor its suppliers, in case of any doubt on safety. The results of evaluations and follow-up actions shall be recorded.

2.1.2.8 Traceability

Effective and appropriate procedures and systems shall be in place to ensure:

-
- Identification of any out-sourced product, ingredient or service;
 - Complete records of batches of in-process or final product and packaging throughout the production process, as necessary.
 - Record of purchaser and delivery destination for all products supplied.

2.1.2.9 Complaint Handling

An effective system shall be in place for the management of customer complaints and complaint data to control and correct shortcomings in food safety. Records of the complaints and their handling till final closure including corrective and preventive actions shall be maintained.

2.1.2.10 Serious Incident Management

An effective incident management procedure for all Own-brand products as well as branded products shall be implemented, which needs to be tested regularly. This should cover both product withdrawal and product recall (as applicable).

2.1.2.11 Control of Measuring and Monitoring Devices

Any measuring and monitoring devices used to assure product safety shall be calibrated at defined frequencies or at least once in a year from accredited/FSSAI notified NABL accredited lab and shall be traceable to recognized standards. All weighing equipment shall comply with Legal Metrology Act and shall be got regularly stamped by LEGAL METROLOGY Department.

2.1.2.12 Product Analysis

Any testing undertaken to confirm product safety shall be in own lab or an NABL approved outside laboratory. Testing shall be carried out by qualified manpower.

2.2 Specific Requirements

Specific requirements which need to be addressed for various functions are highlighted below. These requirements are in addition to those given under 2.1

2.2.1 Fruit & Vegetable Sorting & Grading Centers

- a) Procurement shall be from identified sources (vendor/ farmer) that will allow trace back of the produce to the source. Testing should be done at frequencies pre-defined by retailer or when the source has changed to check the residues and contaminants (heavy metals, microbial, Pesticide residues etc)

-
- b) Fruits and vegetables shall be stored and transported under proper storage conditions. Cut fruits & vegetables shall be stored at 4-70C.
 - c) Crates used shall be clean and dry and not used for any other purpose egg storing chemicals, garbage collection, etc. Crates, once filled, shall be stored away from walls. Identification tags shall be there on all products.
 - d) Weighing scales shall be checked once/day with standard weights (2g-25kg) & records maintained. Weight of products declared shall be net weight & not gross weight when these are in a packed form or on trays.
 - e) Tables used for grading /sorting shall be suitably designed and constructed so as to minimize food safety risks. These shall be made of material such as stainless steel, stone, etc to ensure that the surface is smooth, impervious and without cracks and shall be kept clean. It may have side collar and facility to collect wash water.
 - f) Vehicles for dispatching to stores shall be clean & have suitable ventilation and temperature controls, as needed.
 - g) Only SS knives shall be used for preparing cut fruits & vegetables. For cutting platforms, wood shall not be used. Platform/knives used for cut veg/fruit shall be sanitised with chlorinated water (Hypochlorite solution). Vegetables shall be washed in clean wash basin and dried before cutting.
 - h) In case of waxing of products, the wax to be of food grade. Carbide or any other non permissible chemicals shall not be used for artificial ripening. Ethylene gas may however be used for ripening at appropriate doses.

2.2.2 Meat Cutting & Packing Centres

- a) Raw meat procurement shall be from authorized sources (slaughter house/processing units) that will allow traceability back to the produce/source. All the meat must be with ante-mortem and post-mortem certification from qualified registered veterinarian.
- b) Testing should be done at frequencies pre-defined by retailer or when source has changed to check the microbial, residues and contaminants.
- c) All meat/carcasses shall be stored and transported at 0-40C all the time.
- d) Crates/containers used for meat storage shall be clean, sanitized and not used for any other purpose for veg. food, chemicals, and garbage etc. collection. Colour coding shall be used for proper identification and once filled shall be stored on pellets with proper identification tags/no.
- e) Weighing scales shall be checked once/day with standard weights (2-25kg) and

records maintained. Weights of products declared shall be net weights & not gross weight when these are in packed form or on trays

- f) The processing unit shall be constructed and maintained as to permit hygienic production. The floors, walls, ceiling, partitions, doors and other parts shall be of such material, constructed and finish that they can be cleaned and sanitized thoroughly. It must have efficient ventilation and drainage system. It must be with at least sufficient capacity AC unit to maintain the temp at 15-180C
- g) The processing unit shall be provided with separate cleaning and sanitation area for cleaning the crates, containers, equipments etc.
- h) Tables used for checking, cutting & packing shall be suitable designed and fabricated in SS to avoid any food safety problem. No vessel, container or other equipment, the use of which is likely to cause metal contamination injurious to health shall be used in processing unit.
- i) Vehicle for dispatching to stores shall be clean, sanitized and with refrigeration equipment to maintain temp, 0-40C during transportation.
- j) Only SS knives shall be used for cutting meat and wood shall not be used for meat cutting board. Cutting board and knives used for cutting shall be sanitized with chorine water solution /heat sterilization.
- k) Primary packing material which is coming in direct contact with meat shall be from food grade material and the printing ink must not contaminate the meat after long storage.
- l) The processing unit shall be provided with adequate light at processing, QC inspection and non production rooms also.
- m) Personnel engaged in handling and processing must use protective garments viz, handgloves, nose mask, head gears, footcovers and pvc aprons. It must be color coded to avoid mix up with veg processing

2.2.3 Staples Processing Centers

- a) Vehicles used for transporting bulk or packed products shall be checked for cleanliness and where the same earlier load has been chemicals or non-food, effective cleanliness/ disinfection between the loads shall be ensured. A checklist may be effective for verification of cleanliness of arrival & dispatch trucks.
- b) In case dry fruit are handled/ stored, there shall preferably be an AC room facility (18-250C) available for the same.
- c) Raw material/final goods/ packaging material shall be stored on separate pallets

/racks.

- d) All packed material shall carry the label with date and code to ensure that material is not wrongly dated. Best before date shall be monitored for all packed products at all points in the retail chain.
- e) Fumigation should be carried out, where necessary, to ensure infestation free product till shelf life. There shall preferably be provision for enclosed fumigation chamber with exhaust fan for fumigation. Material shall be fumigated with Aluminium Phosphide (ALP) for 5 days (dosage 9 gm/mt). Fumigation shall be done by authorized personnel. Aeration time after fumigation shall be minimum 3-4 hours. Fumigation records shall be maintained. Fumigation activity shall be carried out to in such a way to ensure personnel & environmental safety. For spices, ethylene oxide as per appropriate doses may be used.
- f) Non-fumigated stock shall be kept away from Fumigated stock to avoid cross-contamination.
- g) Weighing scales shall be accurate to the level required and shall be checked once/day with standard weights (1-25Kg) & records shall be maintained.
- h) No loose screws, nuts, bolts, etc shall be placed close to packing & processing area. In the manual packing area, floor shall be kept clean & clean and clean surfaces (eg SS/Aluminium trays) shall be used for cleaning operations. Effective detection & screening devices such as magnets & metal detectors shall be used.
- i) If the cleaning/packing activity done mechanically it shall be ensured that hygiene condition are maintained & product handled is free from cross-contamination/infestation.
- j) Rejected material shall be kept at identified location with status tag & shall be stored away from Good stock. Timely disposal of rejected stock needs to be done to avoid cross-contamination by insects,
- k) The retailer shall ensure that processor has FSSAI licence /LEGAL METROLOGY Act (Packer registration) for the premises where such activities are carried out. All material invoiced to carry a declaration of vendor on Form E certifying the foods supplied are of the nature and quality as purported.
- l) The products shall be tested as per laid down frequency for all parameters specified under FSSAI regulations to ensure product safety
- m) Shelf life tracking shall be carried out for bulk stock & final products.

2.2.4 Warehouses /Distribution Centers (DC)

- a) Loading and unloading bays shall be covered.

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- b) Layout shall be clear – Storage areas shall be separate and clearly demarcated and identified specially for food/non-food Items (except in case of bundled items for offers, in which case a conscious decision shall be taken on product compatibility); damaged/good stocks/Scrap; corrosive/hazardous/highly inflammable.
 - c) Drains inside the DC operation area should be avoided. However, if drains are there, these shall be covered.
 - d) Temperature conditions shall be maintained for storage of products such as Confectionary items, dry fruits, dairy products, frozen and chilled products. Temperature shall be monitored either continuously or at regular pre determined intervals & data maintained.
 - e) There shall be identified locations for forklift parking, battery charger & spare parts at identified location. Forklift shall be under preventive maintenance to avoid oil grease leakage on floor/packs. Battery charger area shall be kept clean and battery water topped up.
 - f) First aid kit shall be maintained with goggles, water for eye wash, sand cover, etc
 - g) Racks & products to be free from dust & products protected through primary/ secondary packaging.
 - h) There shall be no eating, drinking, smoking, spitting, etc inside the DC storage area. Checks shall be carried out for any consumed/ pilfered products lying in the DC.
 - i) Personnel shall not climb on racks or sit on products
 - j) Products should be handled properly during loading, unloading and stacking to ensure that they do not cause any safety related problem or damages to the products
 - k) Products accepted & released to stores as per acceptance & release norms in relation to shelf life. Sufficient shelf life shall be remaining when these are sent to stores.
 - l) Damaged & expiry stocks shall be segregated and stacked neatly and clearly. These shall be clearly labelled. Disposals shall be done at regular intervals so that there is no contamination of fresh stocks. Records shall be maintained. Destruction of Vendor non-returnable expired stocks shall be ensured in presence of a responsible person so that these do not find their way to consumers.

2.2.5 Stores or Front end

- a) Store interior & exterior shall be clean, no seepage, cobwebs, dirt, dust, etc which can cause a food safety issue
- b) Back room shall be properly arranged, clean & free of hazardous materials eg cleaning chemicals, diesel etc. No food product shall be kept near toilet. Products shall be segregated and clearly identified such as food/ non food; rejected/damaged/ expired/past best before. Damaged and expired products shall be marked as “not for sale”
- c) Product packs, refrigerators, storage racks, Crates, shopping baskets and trolleys shall be clean. Chillers & freezers shall be clean and free from foul smell
- d) Products shall be stored at correct storage temp (e.g., dairy products, cut F&V, mushrooms, sprouts, shelled corn at temperatures of +4 to +7 0C; frozen products at -18 to -22 0C), meat and fish chilled at 0 to 40C. Freezers & chillers shall not be switched off at any time if these contain food products. Temperatures shall be checked at least 3 times a day and records maintained. Temperature display/ monitoring devices shall be calibrated at least once a year.
- e) Food & non-food products should be stored separately, especially where there is a chance of contamination, in entire store & backroom. Vegetarian & non vegetarian frozen products shall be stored in separate freezers to avoid cross contamination.
- f) Displayed product shall be free from insects, fungus, other damage/defects (puffing, open seal, etc). Packed food products shall be free from pin holes or damages which compromise on the safety of the product.
- g) In case water is sprinkled on fruits/ vegetables, or used in any operations where it is added to food or is in direct contact with foodstuffs, the same shall be potable.
- h) Food products shall not be stored directly on the floor. These shall be kept on racks or pallets.
- i) No food product shall be stored outside the store.
- j) Labels on products or shelf edge labels shall not be misleading.
- k) Pest control shall be done on regular basis and shall be effective.
- l) Dump shall be removed at regular intervals and stored in closed dump bags / dust bins & bag emptied daily.
- m) Personal hygiene of Store Staff shall be suitable – clean clothes shall be worn, nails clipped, neat & clean appearance

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- n) Toilet shall be clean with running water, soap & hand drying facilities available
- o) All Regulatory Compliances shall be suitably complied with including
- Availability of FSSA Licence for store including shop in shop activities
 - Nomination of FSSA nominee
 - Calibration & regular stamping of all balances by LEGAL METROLOGY department
 - Checking weighing balances daily using standard weights to ensure correctness of weights and maintaining records
 - Past best before and expired products are not displayed for sale
 - Products meeting all labelling as prescribed under FSSA Act & PCRO
 - No misbranded/adulterated product storage/sale.
 - No product to have double MRP or being sold higher than MRP
 - No child labour employed
 - Fire safety clearance
 - Shop & Establishment-NOC (local municipal authority)
- p) All staff shall have been trained on Food Safety, legal and labelling requirements
- q) Customer complaints on quality shall be recorded and suitably addressed
- r) In case of any processing inside the store, GMP/GHP shall be ensured. For fresh non-vegetarian meat/ fish retailing special precautions shall be taken. These include the following in addition to the points already covered:
- (i) Suitable washing and sanitizing facilities for feet and hands at entry points
 - (ii) Wash basins with running water facility
 - (iii) Meat / fish chopping boards that are hygienically designed. They shall be sanitized and washed when ever required, and positively at the end of the day. Wood shall not be used. Knives for cutting shall be of stainless steel and rust free.
 - (iv) Refrigeration/ freezing equipment shall be suitable to keep the internal temperature of the meat in a frozen condition. The equipments shall be fitted with necessary gauges to indicate the temperature. The recording/ temperature logging devices shall be calibrated at specified intervals.
 - (v) A liquid and solid waste disposal system shall be in place that meets requirements.

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- (vi) Ice should be made from potable water
 - (vii) A certificate for pre-mortem inspection for meat by qualified veterinarian should be available where carcasses are cut and sold at the premises.
 - (viii) Post mortem inspection should indicate absence of any diseases

2.6 Processed Food Vendors

Retailers shall ensure that the vendors/ manufacturers for any food items to be sold under 'Own Brand' shall comply with regulatory requirements prescribed under the Food safety & Standards (Licensing and Registration of Food Businesses) Regulations, 2011.

Annex III: List of Participants

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Existing Food Regulatory / Voluntary Systems in Retail Supply Chain

Dr. Jitendra P Dongare

Marketing Officer, FSSAI

**EXISTING FOOD REGULATORY/ VOLUNTARY SYSTEMS
IN RETAIL SUPPLY CHAIN**

Dr. Jitendra P Dongare

Agriculture – a snapshot

- India is one of the world's largest food producers.
- China : 856 million tonnes
- USA : 608 million tonnes
- India : 601 million tonnes
- Second largest producer of fruits (46.64 million tonnes) after Brazil.
- Second largest producer of vegetables (78.19 million tonnes) in the world, next to China. (13% of world's production)

Challenges in Food Safety

- ❑ Consumers demand improved quality, suitability, safety of food.
- ❑ Effective enforcement action to check adulteration
- ❑ Food security linked to Food Safety- less wastage of food
- ❑ Water shortage– Potability of water- Processing & Drinking
- ❑ Globalization- Sanitary & Phytosanitary (SPS)/ Technical Barriers to Trades (TBT) issues, Harmonization of Standards (Codex)
- ❑ Bioterrorism/ Food Terrorism
- ❑ Changing life style and consumer demand , more than 300 % increase in food processing (present 6% to reach 20% by 2015)

FOOD SAFETY & STANDARDS ACT, 2006

Mandate:

- ❑ To consolidate the Laws relating to food
- ❑ To establish the Food Safety and Standards Authority of India for
 - ✓ Laying down science based standards for articles of food
 - ✓ To regulate their manufacture, storage, distribution, sale and import of food
 - ✓ To ensure availability of safe and wholesome food for human consumption

fssai SALIENT FEATURE OF THE ACT.....

- To ensure that all food meets consumers' expectations.
- To provide legal powers and specify offences in relation to public health and consumers' interest;
- To shift from regulatory regime to self compliance gradually.
- Novel food, dietary supplements, nutraceuticals etc brought into the ambit of the new act.
- Regulation of food imported in the country
- Provision for food recall
- Surveillance mechanism
- New enforcement structure
- Envisages large network of food labs
- New justice dispensation system for fast track disposal of cases
- Harmonization of domestic standards with international food standards

FUNCTIONS OF AUTHORITY

- To regulate, monitor the manufacture, processing, distribution, sale and import of food to ensure its safety and wholesomeness.
- To specify standards, guidelines for food articles
- Limits for Food additives, contaminants, veterinary drugs, heavy metals, mycotoxin, irradiation of food, processing aids.
- Mechanisms & guidelines for accreditation of certification bodies engaged in FSMS certification
- Quality control of imported food
- Capacity building of all the stakeholders
- To establish Surveillance mechanism for food safety
- Scientific advice and technical support to central / state governments

FSS Regulation



FOOD RETAIL SECTOR



Regulatory compliances required by Food Retail operator

- Availability of FSSA License for store including shop in shop activities
- Calibration & regular stamping of all balances by LEGAL METROLOGY Department
- Checking weighing balances daily using standard weights to ensure correctness of weights and maintaining records .
- Products meeting all labeling requirements as prescribed under FSSA Act.
- No misbranded/adulterated product storage/sale.
- No product to have double MRP or being sold higher than MRP
- No child labour employed
- Fire safety clearance
- NOC (local municipal authority) under Shop & Establishment Act.

Requirements laid down in FSSAI regulations Chapter 3-Schedule IV Part II]

- ✓ The sanitary and hygienic standards and worker's hygiene is followed and be implemented as specified in the Schedule – 4
- ✓ The daily records of production, raw materials utilization and sales are maintained in a separate register
- ✓ The source and standards of raw material used are of optimum quality.
- ✓ Premises for manufacture, storage, exposure for sale of food are well separated from any privy, urinal, sullage, drain, storage area for foul/waste matter
- ✓ The testing of all relevant chemical and microbiological contaminants in food products is carried out through own or NABL/FSSAI recognized labs at least once in six months
- ✓ Required temperature/conditions are maintained throughout the supply chain from the place of procurement/sourcing till the consumer end including transportation, storage etc.
- ✓ The food products are bought/sold by the manufacturer /importer / distributor only from or to licensed/registered vendors and records are maintained
- ✓ Form of Guarantee (Form E) – *"I/we hereby certify that food/foods mentioned in this invoice is/are warranted to be of the nature and quality which it/ these purports/ purported to be"*.

9

Chapter 3 Regulations for Packaging and Labeling



Packaging Requirements



General Requirements:

- **Following materials/metals shall not be used for packaging of food-**
 - containers which are rusty
 - copper or brass containers which are not properly tinned
 - containers made of aluminum not conforming in chemical composition to IS:20 specification for Cast Aluminum & Aluminum Alloy for utensils or IS:21 specification for Wrought Aluminum and Aluminum Alloy for utensils
- ✓ All containers should be securely packed and sealed
- ✓ Exterior of the Cans should be Free from Rust, Dents, perforations and Seam Distortions
- ✓ Cans shall be Free from Leaks



Containers made of plastic materials should conform to following BIS Standards-

IS: 10146	Specification for polyethylene in contact with foodstuffs
IS: 10142	Specification for styrene polymers in contact with food stuffs
IS: 10151	Specification for Polyvinyl Chloride (PVC) in contact with food stuffs
IS: 10910	Specification for polypropylene in contact with food stuffs
IS: 11434	Specification for Ionomer Resines in contact with food stuffs
IS: 11704	Specification for Ethylene Acrylic Acid (EAA) copolymer
IS: 12252	Specification for poly alkylene terephthalates (PET)
IS: 12247	Specification for Nylon 6 polymer
IS: 13601	Ethylene Vinyl Acetate (EVA)
IS: 13576	Ethylene Metha Acrylic Acid (EMAA)

Tin and Plastic containers once used, shall not be re-used for packaging of edible oils and fats

Product specific Packaging Requirements



Milk & Milk Products

- ✓ Mechanical bottling and Automatic Sealing of heat treated Milk and Milk Products
- ✓ No re-use of wrapping/packaging material except for re-use type containers
- ✓ Immediate sealing after filling of heat treated milk shall be carried out
- ✓ Sealing devise shall facilitate inspection of opened pouches/containers
- ✓ Immediately after packaging, the dairy products shall be placed in provided storage room



Edible oil/ fat

Material of packaging	Conformance requirement
Tin Plate used for the manufacture of tin containers for packaging edible oils and fats	Standards of prime grade quality as per IS 1993 or 13955 or 9025 or 13954
Tin containers for packaging edible oils and fats	IS No. 10325 or 10339



Fruits & Vegetables

- ✓ Every container used for fruit product packing shall be so sealed that it can not be opened without destroying the licensing number and special identification mark of the manufacturer to be displayed on the top or neck of the bottle
- ✓ Sanitary top cans made up of suitable kind of tin plates shall be used for canned fruits, juices and vegetables
- ✓ Only bottles/jars capable of giving hermetic seal shall be used for bottled fruits, juices and vegetables



- ✓ Juices, squashes, crush, cordials etc shall be packed in clean bottles securely sealed
- ✓ These products when frozen and sold shall be packed in suitable cartons
- ✓ For packing Preserves, Jams, Jellies and marmalades new cans, clean jars, new canisters, chinaware jars, aluminum containers may be used and it shall be securely sealed
- ✓ For pickles clean bottles, jars, wooden casks, tin containers covered from inside with polythene lining of 250 gauge or suitable lacquered cans shall be used





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- ✓ For tomato ketchups and sauces. Clean bottles shall be used, if acidity does not exceed 0.5% as acetic acid, open top sanitary cans may also be used
- ✓ Candied fruits and peels and dried fruits and vegetables can be packed in paper bags, cardboard or wooden boxes, new tins, bottles, jars, aluminum and other suitable approved containers
- ✓ Fruits and vegetable products can also be packed in aseptic and flexible packaging material having food grade quality conforming to BIS standards





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Packaging of canned Meats

- ✓ New sanitary top cans made from suitable tin shall be used
- ✓ The cans shall be lacquered internally (lacquer used shall be sulphur resistant and shall not be soluble in fat or brine) and shall be sealed hermetically after filling
- ✓ Cans used for filling pork luncheon meat shall be coated internally with edible gelatin, lard or lined with vegetable parchment paper before being filled
- ✓ Meat products packed in hermetically sealed containers shall be processed to withstand spoilage under commercial conditions of storage and transport



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LABELING



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Nutritional Information may NOT be necessary for:

- ✓ Foods such as Raw Agricultural Commodities
- ✓ Non Nutritive Foods Like Tea, Coffee, Drinking Water, Alcoholic Beverages.
- ✓ Products that Comprise of Single Ingredients.
- ✓ Foods Served for Immediate Consumption.
- ✓ Foods Shipped in Bulk Which is Not for Sale in that form to Consumers





3. Manner Of Declaration

General Conditions:

- ✓ Any pictorial device/graphic matter on label shall not be in conflict with the regulations
- ✓ Declarations shall be legible, conspicuous, plain, bold and in contrast of the background color
- ✓ Height Of Numerical In The Declaration

Sr. no.	Net Qty.	Minimum Ht. of numeral
1	Up to 50g/ml	1mm
2	Above 50g/ml up to 200g/ml	2mm
3	Above 200g/ml up to 1kg/L	4mm
4	Above 1kg/L	6mm

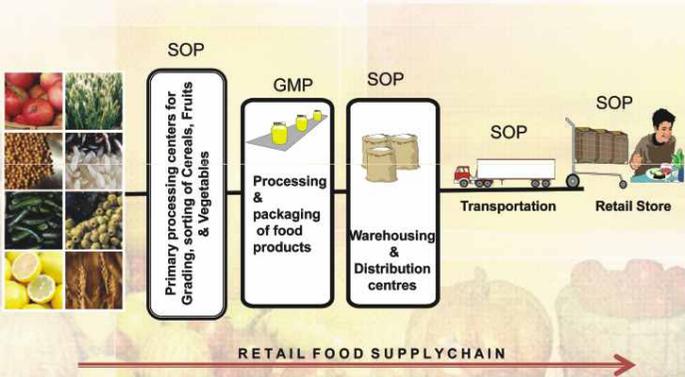



Specific provisions required to regulate retail food supply chain

- The retailer shall have an internal audit system in place in relation to all systems, procedures and activities, which are critical to product safety.
- The retailer shall ensure that any product, which does not conform to requirements (regulatory & consumer safety), is clearly identified and controlled to prevent unintended use or delivery. These activities shall be documented and implemented.
- All externally sourced items whether branded, Own Label, fruits & veg, animal products, etc shall meet the statutory requirements. The retailer shall ensure that all material invoiced to carry a declaration of vendor in form E of FSS Regulation.
- Effective procedures, documentation and systems shall be in place to ensure Traceability.
- An effective incident management procedure for all Own-brand products as well as branded products shall be implemented, which needs to be tested regularly. This should cover both product withdrawal and product recall (as applicable).



Retail food safety management



RETAIL FOOD SUPPLYCHAIN →





Current systems & practices in India to ensure quality and safety in food retail
Is there genuine concern?

Mr. K Radhakrishnan
President Future Fresh Foods

Current systems & practices in India to ensure quality and safety in food retail

Is there genuine concern?

K Radhakrishnan, President Future Fresh Foods

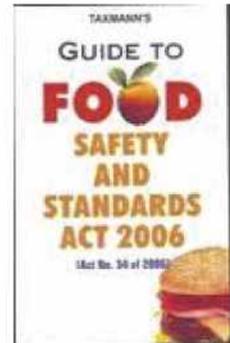


Over View of the Safety laws

The Food Safety and Standards Authority of India (FSSAI) has been established under Food Safety and Standards Act, 2006 for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.

Understanding the importance of safe food for final consumers and the key role of retailers in ensuring and maintaining quality and safety, FSSAI understands the need to develop Retail Standards (including big retail chains as well as the smaller Kiriyana stores) and

effective regulatory mechanism which would place the responsibility on retailers to implement the systems laid down throughout the food value chain.



THE FOOD SAFETY AND STANDARDS ACT, 2006 OBJECTS AND REASONS

- Multiplicity of food laws, standard setting and enforcement agencies pervades different sectors of food, which creates confusion
- in the minds of consumers, traders, manufacturers and investors.

- The main objective of the Act is to bring out a single statute relating to food and to provide for a systematic and scientific development of Food Processing Industries.

- It is proposed to establish the Food Safety and Standards Authority of India, which will fix food standards and regulate/monitor the manufacturing, import, processing, distribution and sale of food, so as to ensure safe and wholesome food for the people.



What does it cover?

The Act, inter alia, incorporates the salient provisions of the Prevention of Food Adulteration Act, 1954 (37 of 1954) and is based on international legislations, instrumentalities and Codex Alimentaries Commission (which is related to food safety norms). In a nutshell, the Act takes care of International practices and envisages an over-reaching policy framework and provision of single window to guide and regulate persons engaged in manufacture, marketing, processing, handling, transportation, import and sale of food. The main features of the Act are:

- (a) movement from multi-level and multi-departmental cont



What does the act promise to do?

The above said Act is contemporary, comprehensive and intends to ensure better consumer safety through Food Safety Management Systems and setting standards based on science and transparency as also to meet the dynamic requirements of Indian Food Trade and Industry and International trade. The Act seeks to achieve the aforesaid objectives



The Retailers' role in Food Safety must be judged by the capability of being able to examine 8000 products every day for safety norms.

It is impossible for the retailer to completely examine the contents even on a sampling basis.

Hence for a retailer the *Labeling norms* are of the highest degree of Importance.

Major types of Food categories

1. Fruit and Vegetables
2. Meats and Fish
3. Staples
4. Bakery
5. Processed Foods and beverages

The only category to be completely to be governed by the Food laws is the Processed Foods and beverages

Others are either on voluntary or not regulated



Retailer's Role in Implementing the Food laws

What retailers do

Products sold by the retailer are of two types

- Products that are not produced by the retailer but sold by it.
- Products that are produced or packed by the retailer

1. A Blanket Indemnity for Liability.
2. Retailer only deals with Suppliers with Food License.
3. Must Conform to the Packaging Commodities Act (PACO) and the PFA/FSSAI.
 - a. PACO is relatively easy to ascertain, by physically examining the products at the time of arrival at the Warehouse.
 - b. PFA difficult to ascertain content.

Who checks what?

Who lays down norms of cultivation and culturing ?

Does any one bother about the levels of antibiotics in poultry? Or fertilizer in plants? Does anyone know what is the meaning of GRASS?

Only these are under Scrutiny

Food safety must start with the farms.

Where does Food Safety Start

	Farm Level	Procurement	Processing	Transportation and handling	Storage and sales
Level of Control and Adherence 1=poor, 5= excellent	1	2	4	2	2
	Almost no controls on qty and qty of inputs. Particularly meats, where antibiotics are used.	Handling norms are loosely defined. There are no inspections that are enforced	HACCP,BRC, etc are voluntary. Only those units that are exporting conform completely.	Intermediary handling is undefined. Chilling? Temp Control? Cross Contamination? Are there any norms	Is storage at the right temp? Is forzen thawing and refreezing? Is temp for frozen-25 deg? Is there rat infestation?

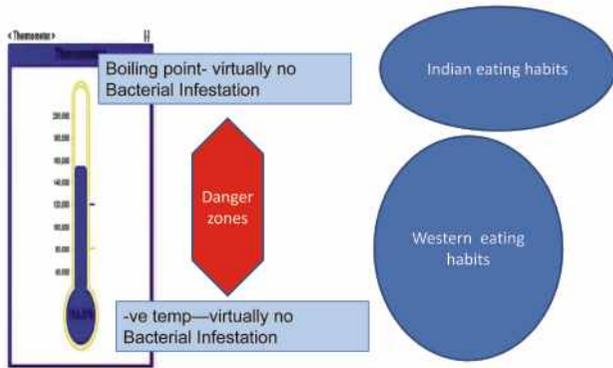
To what avail is final control in processing if the controls and laws at the Agri stage and the selling stages are not conforming?
 What is the traceability even with top multi-nationals companies in India?
When it suits them Multi nationals act like unregulated Indian Companies!!

Any law is only as good as it is enforced!

To follow the Law is expensive.
 To comply fully with the labeling laws is expensive
 Food safety is not up for debate but the problem

- 1.The Consumer must see value in the Labeling Cost
- 2.Unless Govt inspection Agencies enforce the Law equally across Manufacturers and Retailers there will not a level playing field. And Indian standards can never become safe.

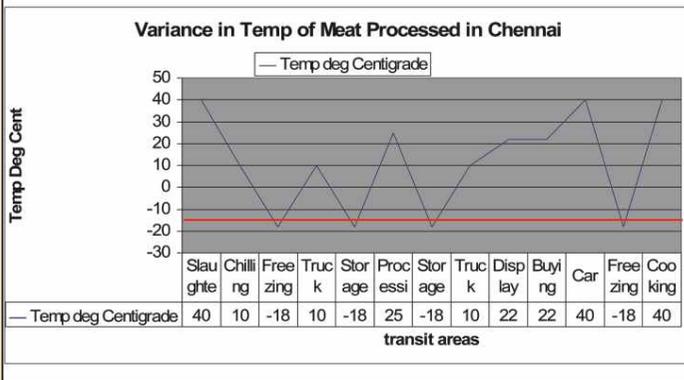
Where is the danger?



Temp Variance in Meat Processing Supply Chain

		Temp deg Centigrade
Slaughter House	Slaughter	40
	Chilling	10
	Freezing	-18
Trucking	Truck	10
	Storage	-18
Factory	Processing	25
	Storage	-18
Trucking	Truck	10
Retail Outlets	Display	22
	Buying	22
Consumer	Car	40
	House	Freezing
	Cooking	40

Temp Variance in Meat Processing Supply Chain



Habits are conditioned to make the law effective

Indians eat only hot food, so infestation is contained, but what about contamination?

Are we still colonial in our thinking?



Yes we are – examples?

Grapes, Sea Food

Recommendations



Two Approaches

1. Voluntary – Every MD of a company should feel to provide safe food to its people
Every food company must on its own feel the need to comply.
2. Enforcement
 1. The day enforcement becomes non-corrupt and enforces the law we will have effective food laws
 2. The law must be simple and unambiguous
 3. Have punishments that are severe for violations

Recommendations



- Creating harmonized and unified standards as per international norms, customised to Indian conditions.
- State of the art support Infrastructure-such as well equipped laboratories
- A responsive and non-corrupt surveillance system



Managing Food Safety and Quality in Retail Chain

Ms. Pornpen Nartpiriyarat

Head of Trading Law and Technical, TESCO LOTUS Thailand

Managing Food Safety and Quality in Retail Chain

Pornpen Nartpiriyarat
December 14th, 2011

Agenda

1. History of Tesco Lotus
2. Tesco Lotus Strategy and Values
3. Technical Strategy
4. Managing Food Safety and Quality
5. Best Practices
6. Q&A

Tesco Lotus Thailand History

- ❖ October 29, 1994 : 1st Store opened at Seacon Square branch, Srinakarin Road
- ❖ 1998 : Lotus Supercenter was joined with Tesco PLC, No.1 modern retailer in UK
- ❖ 2004 : Opened Green Store at Rama 1 branch
- ❖ 2008 : Opened Green Store at Salaya branch
- ❖ 2010 : Fresh Food Distribution Centre
- ❖ 2011 : Extra Store at Rama IV and Khon Kaen branch
- ❖ 2011 : Zero Carbon Store at Bangpra – Chonburi branch

3

Tesco Lotus Strategy

- ❖ Grow our core business
- ❖ Excel at innovating for customer
- ❖ Invest in our people
- ❖ Lead on community and environment issues
- ❖ Grow retail service

DISTRIBUTION CENTER

TESCO Lotus Tesco Lotus Values

TESCO Value

No-one tries harder for customer

- ❖ Understand customers
- ❖ Be first to meet their needs
- ❖ Act responsibly for our communities

Treat people how we like to be treated

- ❖ Work as a team
- ❖ trust and respect each other
- ❖ Listen, support and say thank you
- ❖ Share knowledge and experience

TESCO Lotus Tesco Lotus Business

- ❖ 134 Hypermarkets
- ❖ 126 Talad
- ❖ 640 Express
- ❖ 4 DCs
- ❖ Job creation > 36,000 positions
- ❖ Service customers > 50,000,00 per month
- ❖ Trading with wide range of suppliers (SME until International)
- ❖ > 50,000 items sold in stores
- ❖ > 8,000 items are own label products







TESCO Lotus Tesco Lotus Technical Strategy

- > Improve Own label Product and Fresh Food Quality
- > Improve Supplier Capability
- > Deliver Ethical Trading Programme in All suppliers
- > Deliver the Safety and Cleanest Stores / DCs
- > Work Closely with Government to lead industry
- > Improve Technical Capability for TL&T stream



Head of Trading law & Technical



Senior Operation Standard & Policy Manager



**Senior Technical Manager
Grocery Food & Non Food Manager**



Senior Regulatory & Policy Manager



Senior Quality Manager

TESCO Lotus Managing Food Safety and Quality

Tesco Group Policy

- ❖ Products that we sell will be safe and legal and the information that we provide to our customers will be legal, decent, honest and truthful, in all countries in which we operate.
- ❖ Our people will deliver this policy by applying the rules set out in the Tesco Product Rules. The executive committee of the Tesco Board, through its Compliance Committees, will govern and monitor this policy.

TESCO Lotus Managing Food Safety and Quality

Supply Chain Due Diligence

The diagram illustrates the supply chain from Farm to Store. Key control points include:

- Quality control at primary site** (Farm)
- Cool & Proper Quality control for manufacturing and storage** (Manufacturer)
- Clean, Cool & Product Spec control** (DC)
- Proper Display & storage** (Store)

 Temperature control is maintained via transportation between all stages.

TESCO Lotus Managing Food Safety and Quality

Farm Management / Site Approval

- ❖ Local/International Standard
- ❖ Technical audit (TFMS)
- ❖ Ethical audit
- ❖ Traceability
- ❖ Technical training
- ❖ Metal Control
- ❖ Hygiene
- ❖ Pest Control
- ❖ KPI
- ❖ Record Keeping
- ❖ Continuous Development

GLOBALG.A.P. Supplier Ethical Data Exchange

TESCO Lotus Managing Food Safety and Quality

Product Management – Both for fresh & grocery

- Product Development
- Specification
- Labeling –(label requirement)
- Nutrition
- Shelf life testing
- Product testing with customer – self monitoring program
- Product surveillance
- Consumer Compliant – customer feedback very imp
- Product withdrawal & Recalls

TESCO Lotus Managing Food Safety and Quality

Cool Chain Management (very imp piece to recognize and work on it)

- Meat / Seafood 0 – 4°C (whole supply chain)
- Frozen – 25 °C (whole supply chain)
- Leafy Vegetable 12 °C
- Local Fruits 20 °C (is in blueprint- not approved as of now)
- Quality Control

TESCO Lotus Managing Food Safety and Quality

Store and Distribution Management

- Store and DC audit – gives a transparency to do the improvement followed by capability improvement, internal quality checks in the stores. Lot of investments in training.
- Safest and Cleanest stores
- Capability
- Highest quality check in stores
- Backroom management
- Preventive Maintenance
- Temperature control
- 15 - minute Rule -
- Waste management in stores and DCs

TESCO Lotus Managing Food Safety and Quality

World Class Training and Career Development for our Technical Team

Leadership

Quality Focus

Lead Auditor Training

Tesco Manufacturing Standard

Microbiological Risk Assessment

Gold Standard Specifications

TESCO Lotus Tesco Best Practices

- QC Check
- Accept / Reject
- Quality / Temperature

TESCO Lotus Tesco Best Practices

✓

- Plastic curtain
- Check Temperature
- 15 Minute Rule

✗

- Open at all time
- No check
- Not follow

TESCO Lotus Tesco Best Practices

✓

- Shroud product
- Display practice
- Load line recommendation
- Back Stock Management
- Safety Cutter

✗

- No shroud
- Poor display
- Poor display
- Customer Communication

TESCO Lotus This is the Journey

- Recognize not everybody starts at the same Level
- We continue to invest in training and coaching
- We work shoulder to shoulder with suppliers
- Their success is our success



Regulatory system in retail supply chain : Thailand Case Study

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Director, Food Safety Operation Center (FSOC), Thailand

Regulatory system in retail supply chain : Thailand Case Study



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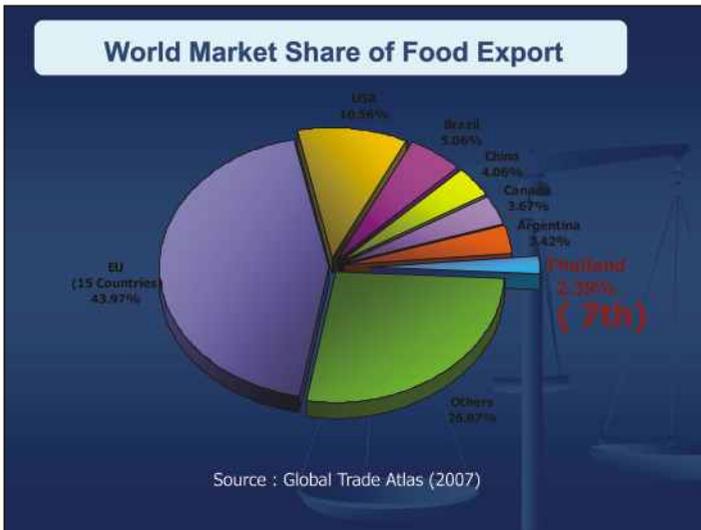
TOPICS

- Background
- Regulatory system to control retail food in Thailand
- Definition of Retail Food
- Public Health Act, B.E.2535 (1992)
- Food Act, B.E. 2535 (1992)
- Concept of Food Safety Emergency & Information Sharing
- Q&A



Background

- Population = 67 million (male : 31, female : 32)
- Supermarkets, Minimarts and Food Retails > 300,000
 - 18,240 (BKK)
- National Food Safety Policy has been declared since 2003



National Food Safety Policy

<p>2003 Kitchen of the World</p> <p>☆</p> <p>“to protect public health & facilitate trade”</p>	<p>2010-2011 National Strategic Policy on Food Management</p> <p>☆</p> <ul style="list-style-type: none"> -Food Quality & Safety -Healthier Food Supply -Food Security -Food Education -Empowering implementation 	<p>2012-2015 Food Quality & Safety for Global Consumers And Healthy for Thai People</p> <p>☆</p> <ul style="list-style-type: none"> -Risk based management -Integrated implementation -Information networking -International cooperation -Food Safety Best Practice Promotion ..
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Public Health Policy Direction

National Strategic Plan (2012-2015) will strengthen on integrated implementation

Networking among agencies from farm to table to promote food quality & safety and incident management system.

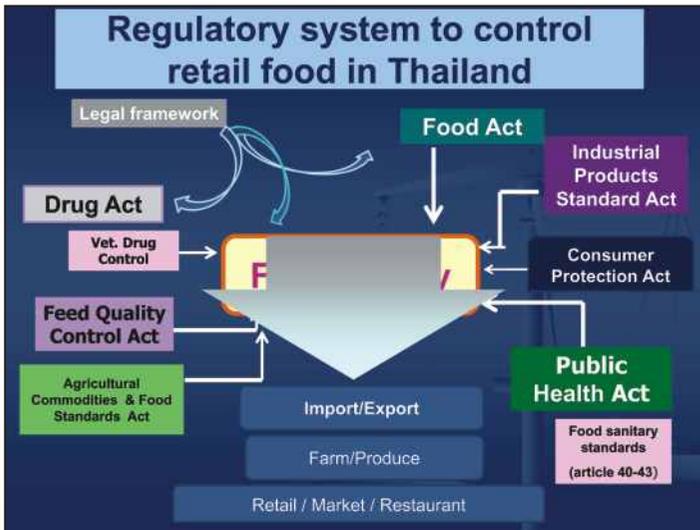
Focus on food safety, nutrition, food-borne diseases and chronic diseases.

Health Care and Public Health Protection

Trying to promote traceability from farm to table

Information networking among food authorities





Definition of Retail Food

- Retail food is all food, other than restaurant food, that is purchased by consumers and consumed off-premise. Retail food comes in all shapes and sizes and is protected by numerous government agencies.

Definition of Retail Food

- Retail foods include ...
....Market , supermarket , minimart , hypermarket , flea market mobile market and so on.

Public Health Act, B.E.2535

- Thailand has the Public Health Act, B.E.2535 for controlling food stuff stored place, market and place where meal are sold (food shop, canteen, restaurant etc.)
- This law is used to control food stuff stored places that include retail foods by the local government.

www.laws.anamai.moph.go.th

Some Definition in Public Health Act

- **"place where foodstuff is stored"** means any building, place, or area which is not a public place or way, arranged for the storage of food in fresh, dry, or any other state for sale to buyers for consumption after processing ;

Some Definition in Public Health Act

- **"place where meals are sole"** means any building, place, or area which is not public place or way, arranged for the preparation or cooking of meals to be served to buyers for consumption at the place or taken away

Some Definition in Public Health Act

- **"market place"** means a place ordinarily arranged for merchants to assemble to offer for sale goods consisting of animal, meat, vegetable, fruit, fresh or already prepared or cooked food, or perishable foodstuff, with or without other kinds of goods for sale, and includes an area arranged for merchants to assemble to offer said goods for sale regularly or from time to time or on appointed dates

Public Health Act, B.E.2535

As this law.....

- Any person who wishes to set up place where meals are sold or a place where foodstuff is stored in any building or space must obtain a license from the local official
- Persons who set up a place where meals are sold or a place where foodstuff is stored, must comply with the rule prescribed in the local provisions or the conditions prescribed in the license or certificate of notification.

Public Health Act, B.E.2535

As this law.....

- The local government shall have powers to issue local provisions as follows
 - (1) prescribing category of places where meals are sold or places where foodstuff is stored, according to type of food or characteristic of the business establishment, or method of distribution

Public Health Act, B.E.2535

- (2) prescribing rule on establishment, use, and care of the place and hygienic conditions of the area where food is sold, served, prepared, or stored ;
- (3) prescribing rule on prevention of nuisances and prevention of contagious disease ;

Public Health Act, B.E.2535

- (4) prescribing food distribution time ;
- (5) prescribing criteria on personal hygienic conditions of persons preparing and serving food ;
- (6) prescribing criteria on hygienic conditions of food and process of food distribution, preparation, and storage
- (7) prescribing criteria on hygienic conditions receptacles, equipment, water, and other utensils.

Public Health Act, B.E.2535

- From the Public Health... the details for controlling will write as.....

- Ministerial Regulations
- Regulations
- Royal decrees
- Notifications
- The Recommendation of the Public Health Committee

Food Act. B.E. 2535 (1992)

Chapter 4 : Control of Food

SECTION 25. No one way produce, import for sale or distribute the following foods

- (1) impure food (unsafe food);
- (2) adulterated food;
- (3) substandard food;
- (4) other food which specified by the Minister

SECTION 26. Food of the following description shall be deemed Impure;

- (1) Food which contains anything likely to be dangerous to health
- (2) Food In which a substance or chemical substance has been mixed which could deteriorate the quality unless such admixture is necessary to the process of production, the production and has been authorized by the competent officer.
- (3) Food unhygienic ally produce, packed or stored.
- (4) Food produced from animals having disease which might be communicated to men.
- (5) Food in containers made of materials which are likely to be dangerous to health.

Food Act. B.E. 2535 (1992)

Chapter 4 : Control of Food (cont. 1)

SECTION 27. Food of the following description shall be deemed adulterated:

- (1) Food for which other substances are partly substituted or In which valuable substances are wholly or partly removed and which is sold as or under the name of the genuine food.
- (2) Substances or food produced as substitutes for any food end distributed as being genuine food.
- (3) Food which is mixed or prepared in any way to conceal defects or Inferior quality of the food.
- (4) Foods labeled in order to deceive or try to deceive the purchasers in matters of quality, quantity, usefulness or special nature or place or country of production.
- (5) Food not up to the quality or standard prescribed by the Minister under Section 6 (2) or (3) end the quality or standard of that food deviate late from the upper or lower specified unit more than thirty percent or Its deviation may harmful to the consumer.

Food Act. B.E. 2535 (1992)

Chapter 4 : Control of Food (cont. 2)

SECTION 28. **Substandard food** is a food not up to the quality or standard prescribed by the Minister under Section 6(2) or (3) but its deviation is not as high as in Section 27(5).

SECTION 29. Food of the following description shall be deemed food under Section 25(4)...specified by the Minister..

- (1) unsafe food for consumption;
- (2) unreliable indication;
- (3) value or usefulness is not appropriate to the consumer.

SECTION 30. For the benefit of ensuring that food be hygienic end to protect consumer from health hazard. The Secretary of the Food end Drugs Administration shall be empowered to give written order to. ...

Food Act. B.E. 2535 (1992)

Chapter 4 : Control of Food (cont. 3)

Section 30 (cont.)

- (1) the license to alter or repair production premises or storage premises.
- (2) suspension of production or import food which is unlawfully produced or imported or food that the results of analysis show that it is not fit for consumption.
- 3) Publicize the results of analysis to the public in the case that it is impure food under Section 26 or adulterated food under Section 27 or substandard food under Section 28 or food which could be harmful to the health of the public or that container is made of materials which are likely to be dangerous when it uses as a food container. The publish shall be included the following.
 - (a) if the producer is known, the name of the producer , the class or description of the food or containers and the trade names or lot number to be declared.
 - (b) in the event that the producer is not known but the distributor/retailer is known, the name of the distributor/retailer including class or description of the food or container to be declared.

Food Act. B.E. 2535 (1992)

Chapter 4 : Control of Food (cont. 4)

SECTION 42. To protect the interests and safety of the consumer, the authority is empowered to give written orders to

- (1) the producer, importer or distributor of food or food advertising person stop advertising which considered to be violated Section 41.
- (2) the producer, importer or distributor of food or foods advertising person stop producing, importing, distributing or advertising a food which the Commission deems as not having the usefulness, quality or indication as advertised

Food Act. B.E. 2535 (1992)

Chapter 6 : Competent Officer

SECTION 43. In the performance of their duties, competent officer shall have the following powers:

- (1) to enter a place of production, storage area, place of sale or office of the producer, storekeeper, distributor, including the importer office for inspection in connection with enforcement of this act during normal working hours;
- (2) where it is suspected that there is a violation of this act, to enter a place or vehicle to inspect the food end seize or attach the food or utensils connected with the violation including the containers and packages of food and documents connected with the food:

Food Act. B.E. 2535 (1992)

Chapter 6 : Competent Officer (cont. 1)

SECTION 43. (cont.)

- (3) to take reasonable quantity of food for inspection and analysis.
- (4) to seize or attach food or containers suspected of capable of hazardous to the health for analysis;
- (5) to seize or attach impure food, adulterated food or substandard food or containers capable of hazardous to the health or having the nature of which not in accordance with the quality or standard set by the Minister under Section 6(6).

Food Act. B.E. 2535 (1992)

Chapter 6 : Competent Officer (cont. 2)

SECTION 44. Food or containers seized, attached or collected by competent officer under Section 43, after checking by the competent officer and proved to be impure under Section 26, adulterated under Section 27 or substandard under Section 28 or food that specified by the Minister under Section 29.... or to be containers which can be hazardous to the health of the consumer or having characteristics not according to the quality or standard set by the Minister under Section 6(6). Provided no legal proceedings in the court, the competent officer with the approval of the commission may order to destroy or treat in any way as may be deemed appropriate.

Campaign Project

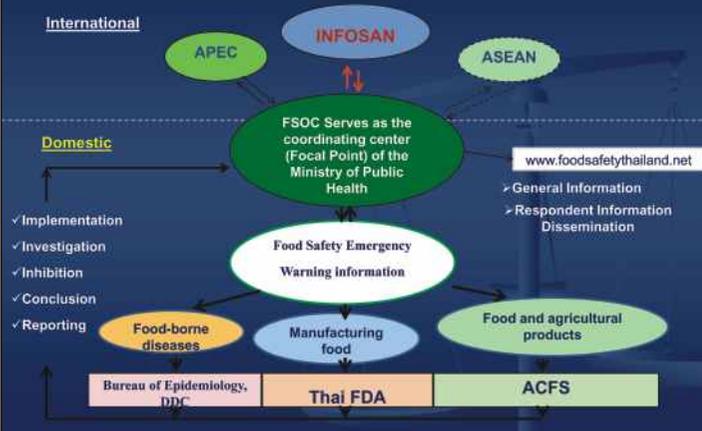
- GMP / HACCP / GHP at all food business
- Healthy Market project
 - Supermarket
 - Minimart
 - Fresh Market
- Clean Food Good Taste Project
 - Restaurant
 - Food stall
 - Food services : hospital, work place, school canteen

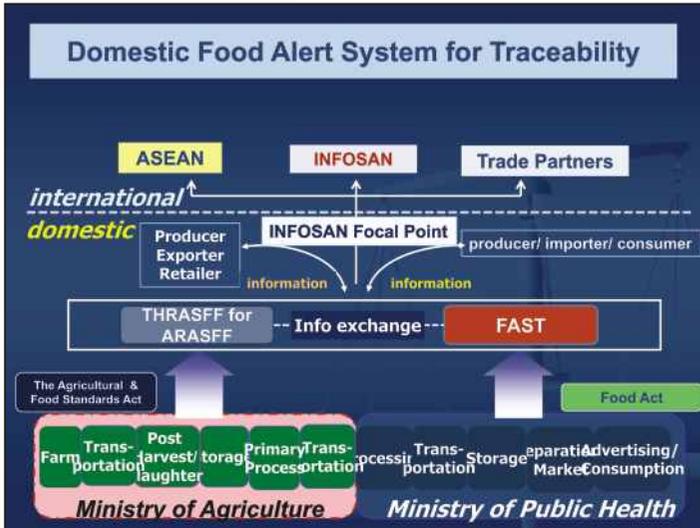
Concept of Food Safety Emergency & Information Sharing

- **Food Safety Emergency :**
 "A situation, whether accidental or intentional, that is identified by a competent authority as constituting a serious and as yet uncontrolled foodborne risk to public health that require urgent action."

Under Codex principles and guidelines for the exchange of information in food safety emergency situations (CAC/GL 19-1995, Rev.1-2004).

Food Safety Information Networking





The Results of Food Safety Monitoring at market place and food retail in Year 2010

- Checked 517,175 Samples, Contaminated 5,751 samples (1.11%)

Food Contaminants	Provincial Public Health Office (61 provinces)		
	No. of Checked	No. of Contaminated	Percent of Safe (%)
Beta-agonists	2,690	37	98.62
Borax	119,000	192	99.84
Bleach agents	85,356	41	99.95
Formalin	73,660	475	99.36
Anti-fungal	84,101	282	99.66
Pesticide residue	128,885	2,726	97.88
Microorganisms	16,476	1,605	90.26
Reused cooking oil	4,638	231	95.02
Aflatoxin	2,369	162	93.16
Total	517,175	5,751	98.89

The Results of Food Safety Monitoring at market place and food retail in in Year 2011 (6 months)

- Checked 143,981 samples, Contaminated 6,250 samples (4.34 %), Safety 95.66 %

Food Contaminants/Type of Foods	No. of Checked	No. of Contaminated	% of Safe
1. Beta-agonists	1,471	54	96.33
2. Borax	29,067	71	99.76
3. Bleach agents	21,707	9	99.96
4. Anti-fungal	19,510	86	99.56
5. Formalin	18,389	250	98.64
6. Pesticides	32,482	1,721	94.70
7. Reused cooking oil	1,988	243	87.78
8. Drinking water from production facility	596	208	65.10
9. Coliform bacteria in Ice samples	793	162	79.57
10. Microorganisms in restaurant CFGT passed	-	-	-
- Ready to eat foods	7,419	1,613	78.26
- Hand contact with food	3,790	6,833	76.20
- Container	6,269	7,992	85.91
11. Aflatoxin, School milk, Iodine & etc.	500	238	90.40





About FSSAI

The Food Safety and Standards Authority of India (FSSAI) has been established under Food Safety and Standards Act, 2006 which consolidates various acts & orders that have hitherto handled food related issues in various Ministries and Departments. FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.

Ministry of Health & Family Welfare, Government of India is the Administrative Ministry for the implementation of FSSAI. The Chairperson and Chief Executive Officer of Food Safety and Standards Authority of India (FSSAI) have already been appointed by Government of India. The Chairperson is in the rank of Secretary to Government of India.



About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. FICCI has contributed to this historical process by encouraging debate, articulating the private sector's views and influencing policy.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry.

FICCI draws its membership from the corporate sector, both private and public, including SMEs and MNCs; FICCI enjoys an indirect membership of over 2,50,000 companies from various regional chambers of commerce.

FICCI provides a platform for sector specific consensus building and networking and as the first port of call for Indian industry and the international business community.

Our Vision

To be the thought leader for industry, its voice for policy change and its guardian for effective implementation.

Our Mission

To carry forward our initiatives in support of rapid, inclusive and sustainable growth that encompass health, education, livelihood, governance and skill development.

To enhance efficiency and global competitiveness of Indian industry and to expand business opportunities both in domestic and foreign markets through a range of specialised services and global linkages.

FICCI Retail division

Ms. Shilpa Gupta

Head – Retail & FMCG

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About FAO

The Food and Agriculture Organization of the United Nations (FAO) strives for a world free of hunger and malnutrition where food and agriculture contribute to improving the living standards of all, especially the poorest, in an economically, socially and environmentally sustainable manner. The global goals of FAO are:

- reduction of the absolute number of people suffering from hunger, progressively ensuring a world in which all people at all times have sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life;
- elimination of poverty and the driving forward of economic and social progress for all, with increased food production, enhanced rural development and sustainable livelihoods; and
- sustainable management and utilization of natural resources, including land, water, air, climate and genetic resources, for the benefit of present and future generations.

The FAO Asia-Pacific regional office (RAP) located in Bangkok covers 44 member countries in the region. RAP is responsible for the identification of regional priorities in the region in support of food security, agriculture and rural development and the planning, implementation, monitoring and reporting of FAO's response to the regional priorities of member countries in the context FAO's strategic objectives.

In the area of food safety, FAO's main strategic objective is to improve quality and safety at all stages of the food chain by providing support at the country and regional levels for:

- the facilitation of regional activities on food standardization, including strengthening country capacities to understand the importance and use of Codex standards and texts;
- strengthening institutional, policy and legal frameworks of countries in the food chain approach to food safety and quality management, with strengthened regional coordination and networking;
- the effective design and implementation of programmes for food safety and quality management and control with emphasis on risk management as per international norms; and
- establishment of effective programmes to raise awareness of food producers and processors about food safety and quality issues and build capacities to implement good practices in the producer to consumer chain in order to meet the requirements of local, national, regional and international markets.

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