



भारतीय कृषि एवं खाद्य परिषद्  
INDIAN COUNCIL OF FOOD AND AGRICULTURE

# FOOD SAFETY, QUALITY AND SUPPLY CHAIN MANAGEMENT NATIONAL ROUND TABLE CONFERENCE



22<sup>nd</sup> MARCH 2017  
INDIA INTERNATIONAL CENTRE, NEW DELHI



# FOOD SAFETY, QUALITY AND SUPPLY CHAIN MANAGEMENT - OVERVIEW



## INTRODUCTION

India has shifted from food deficit to food surplus, on way to become a food exporter from a food importer. India is amongst the leading Wheat, Rice, Milk and Fruit & Vegetable producer and exporter in the world. After achieving food security, ensuring safe and quality produce to the population is a key concern. Thus, the focus on the Food Safety and Quality along with Supply Chain Management would help in effectively preventing and controlling many food borne epidemics in the country that impact large rural and urban population. Promoting the same would also improve the awareness of food business operators and consumers on simple measures to ensure safe food for all along with expanding and enriching the domestic trade and export.

During the movement of food from field to table, it passes through various stages of production, transport, storage, processing, distribution etc. with considerable chances of gaining contamination and plummeting the quality. Maintaining food safety and quality has become imperative when it comes to food trade and customer demand. Globally, most of the developed countries are far

ahead in food safety, thus, making it unavoidable for India to efficiently manifest the same to retain and expand its global reach. Governments and other stakeholders across the countries are intensifying efforts to improve Food Safety and Quality.

## FOOD SAFETY

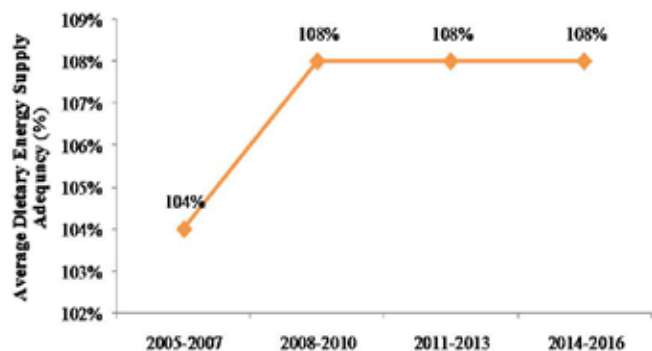
The concept of food security indicates four components, namely food availability, access, stability and utilization. India is food self-sufficient but has highest undernourished population in the world. Also, India has highest number of malnourished children and pregnant women, and a large number of children are undernourished.

## AVERAGE DIETARY ENERGY SUPPLY ADEQUACY (ADESA)

Average Dietary Energy Supply Adequacy (ADESA) is important indicator for food availability. It measures the dietary energy supply in a country as a percentage of the average dietary energy requirement (ADER) for the total population. This indicator mainly reveals whether food is sufficiently available to meet calories requirement of a country's population. If the indicator is 100 its supply is

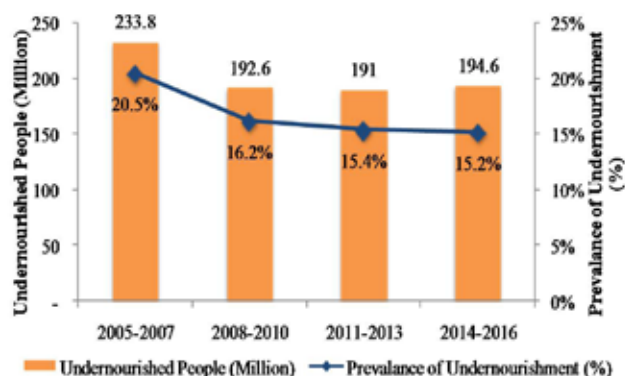


### Average Dietary Energy Supply Adequacy in India; 2005-2016



Source: FAO

### Prevalence of Under Nourishment in India; 2005-2016



Source: FAO

equal to its requirement. If it is less than 100, then food supply of country is inadequate to meet the population calorie requirements of its population. If it is higher than 100 then the country is adequately producing food.

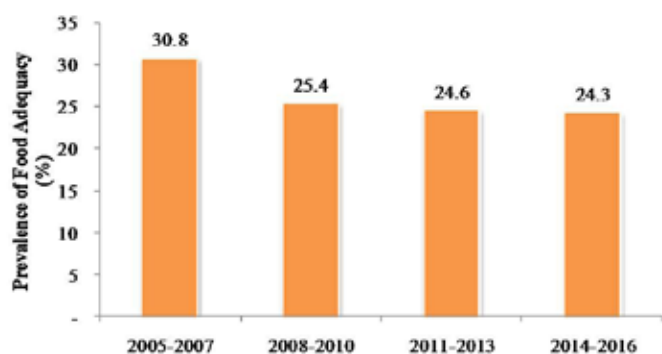
In India, availability of calories is 8% higher than what is required for the entire population. However, for more than 66% of the population per capita consumption of calories is below 2100 per day in urban areas and 2400 per day in rural areas. The figure of 2100 for urban and 2400 for rural is the minimum consumption norm set by the Planning Commission in India. This indicates that there is a problem in food distribution and not food.

### PREVALENCE OF UNDER NOURISHMENT

Prevalence of undernourishment is an indicator of chronic food deprivation. It is also an indicator of 'hunger'. It shows the percentage of population which does not consume adequate quantity of calories to maintain a healthy and normal life.

Approximately, 15% of the total population of India has

### Prevalence of Food Adequacy in India; 2005-2016



Source: FAO

been undernourished. From the above graph, it is clearly visible that however, in terms of percentage, there is a decline in the prevalence of undernourishment but number of undernourished people increased during 2014-16. The major reasons for the same may be constantly increasing population along with the income inequalities and poverty.

### PREVALENCE OF FOOD ADEQUACY

Prevalence of food inadequacy is also an indicator of food access similar to prevalence of undernourishment, but calculated setting the caloric threshold to a higher level. In addition to the undernourished population (hunger), it also accounts for those at risk of not consuming food for normal physical activity.

The figures for prevalence of food adequacy show more or less similar pattern as that of undernourishment, but at a higher magnitude. Prevalence of undernourishment is 15% in India, while that of food inadequacy is 24%. This indicates that about 15% of the population in India suffers from chronic food deprivation and about 11% is at the risk of not consuming food for normal physical activity.

### FOOD QUALITY

Quality of foods may be defined as the composite of those characteristics that differentiate individual units of a product, and have significance in determining the degree of acceptability of that unit to the user.

The characteristics that impart distinctive quality may be described by four different attributes, namely, color & appearance, flavor (taste and aroma), texture and nutritional value.





## FOOD QUALITY STANDARDS

In India the Food Safety and Standards Authority of India (FSSAI) is the apex food regulator. It is empowered by and functions under the Ministry of Health and Family Welfare, Government of India. The FSSAI implements and enforces food regulations as prescribed in the Food Safety and Standards Act, 2006 (FSS Act).

FSSAI has taken various initiatives for improving and checking the food quality standards with setting up of state/government food testing laboratories in various states.

However, the number of food testing labs is not sufficient along with the shortage of food analysts. Thus, there is a need to promote and create awareness among individuals relating to the importance of the establishment of food testing labs and food analyst as a profession.

### State-Wise Number of Functional Food Testing Laboratories on the Basis of Maximum Samples Drawn; 2015-16

| S.No | States            | No. of Laboratories |
|------|-------------------|---------------------|
| 1    | Madhya Pradesh    | 1                   |
| 2    | Gujarat           | 6                   |
| 3    | Andhra Pradesh    | 1                   |
| 4    | Karnataka         | 6                   |
| 5    | Chhattisgarh      | 1                   |
| 6    | Delhi             | 1                   |
| 7    | Goa               | 1                   |
| 8    | Himachal Pradesh  | 1                   |
| 9    | Bihar             | 1                   |
| 10   | Arunachal Pradesh | 1                   |

Source: FSSAI

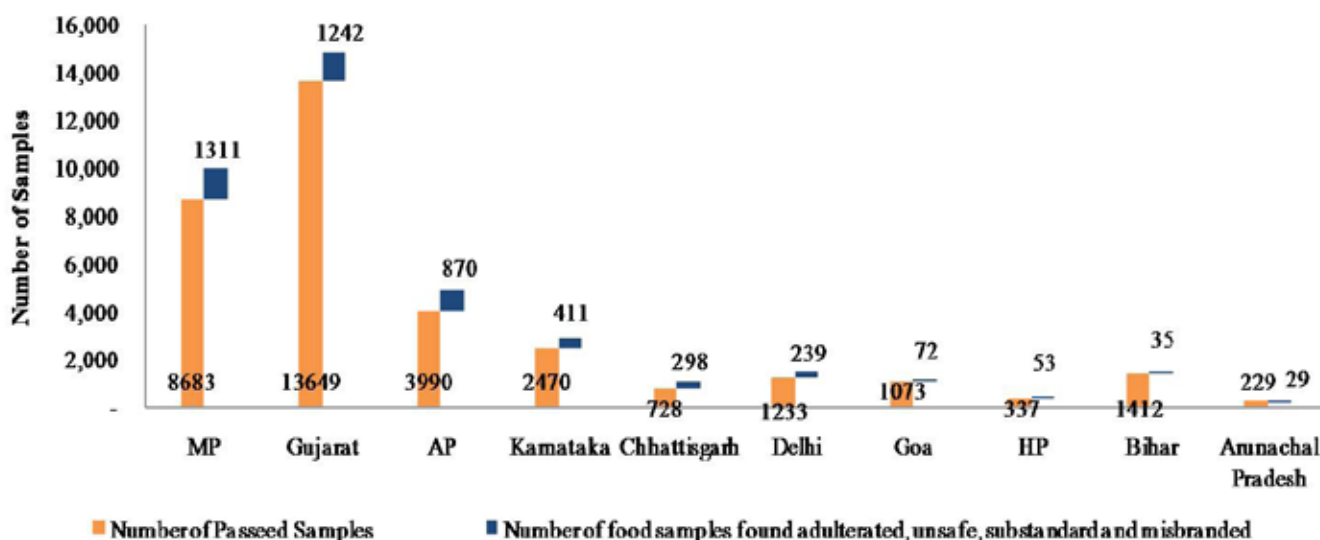


These food testing laboratories test the sample of food according to the standards laid down by the FSSAI.

The following graph states the total number of samples passed by these laboratories and the number of food samples found not fit for consumption in 2015-16. Madhya Pradesh and Gujarat had the highest number of samples being analyzed, of which majority were fit for the consumption.

Though, according to various studies already conducted, the samples analyzed are not enough nor are the testing standards up to the mark as large number of food consignments have been rejected by the FDA over the years due to quality issues.

### STATE-WISE NUMBER OF SAMPLES PASSED AND REJECTED; 2015-2016



Source: FAO



Some of the reasons for such quality issues may be attributable to the unsafe farming practices such as pesticide overuse, the use of untreated manure and poor hygiene practices prevalent in many areas result in health risks for the consumer and farmer along with the barrier for exports.

### **CURRENT SCENARIO**

Consumers' food value equation is gradually changing from price, taste and convenience to health, wellness, safety, social impact and experience. Wellness and safety are definitely influencing the consumer behavior and they are increasingly looking for information such as food safety standards, and complete and accurate labeling and traceability of the food products they buy. In India, an ever expanding consumer base, concerned about food quality and safety are the important drivers for the increased attention to food quality.

However, food quality will remain a major concern till Good Agricultural Produce (GAP) principles are implemented nationwide. Though, compliance is costly and can threaten the existence of small & poor farmers and value-chain operators in particular. Thus, standards and their implementation require careful consideration.

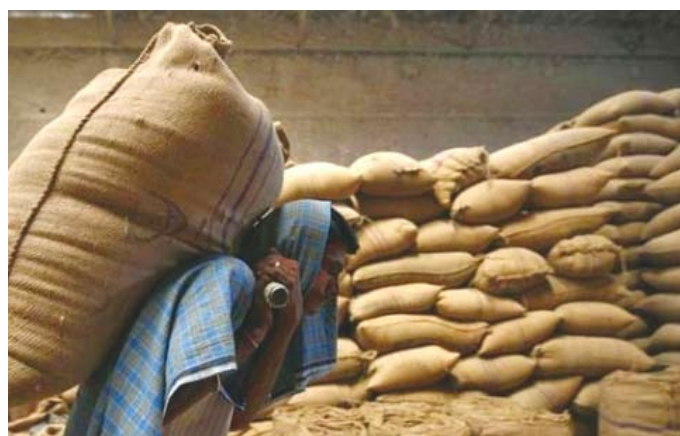
### **SUPPLY CHAIN MANAGEMENT**

Though India has lot many positives in the fruit and vegetable production and marketing sector, it has several disadvantages too. The country lacks an efficient supply chain for the distribution of the fruits and vegetables.

Supply chain management plays an integral role in keeping business costs minimum and profitability as high as possible. There are many factors involved in supply chain management of which flow is one of the most important factors. Flow includes the product flow, the information flow and the finances flow.

The product flow includes the movement of goods from a supplier to a customer, as well as any customer returns or service needs. The information flow involves transmitting orders and updating the status of delivery and the finance flow includes all the financial aspect such as invoices and payments. The present challenge in supply chain management is to maintain all three flows in an efficient manner, resulting in optimal results for farmers, growers, wholesalers and customers.

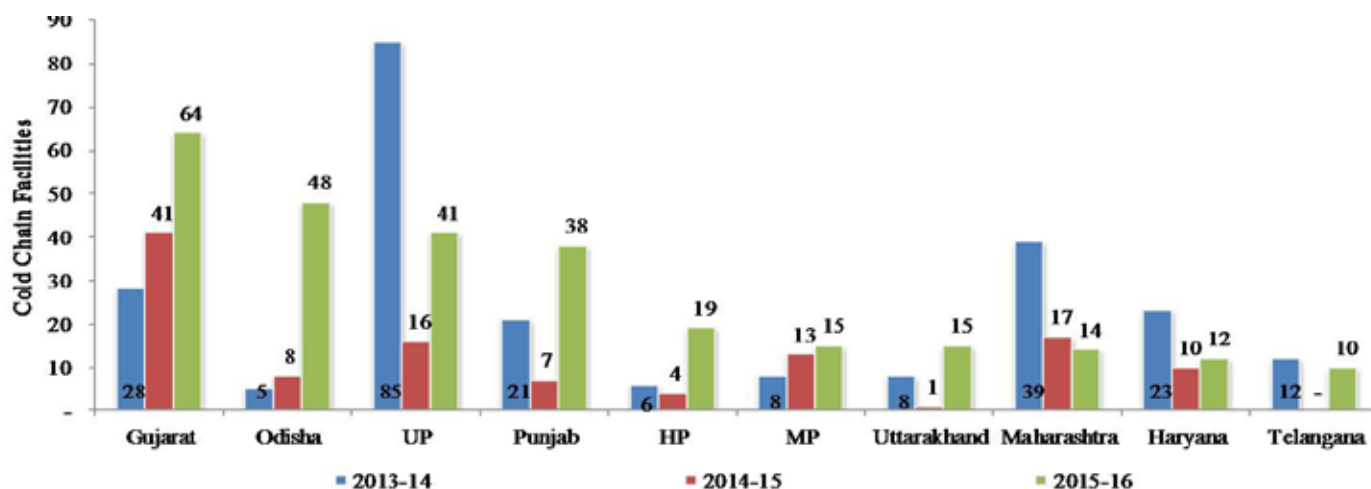
It has been found that 30%–40% of fruits and vegetables (approx. 25% of total worth) are wasted due to post harvest losses, leading to low availability of fruits and vegetables







## State-Wise Number of Cold Storages Facilities/ Cold Chain Projects Approved for Financial Assistance in the Country; 2013-2016



Source: Ministry of Food Processing Industries

for consumers and the need for import; in spite of India being second largest producer. There is lack of basic as well as specialized infrastructure such as cold storages, refer vans, cool chains, ripening chambers etc.

Also there is a missing link between production and research system and consumers. The system lacks in capacity building, market information, research and intelligence. India is short by 10 million tons of cold storage capacity due to which over 30% of agricultural produce goes waste every year, more than 20% of produce from fields is lost to poor post harvesting facilities and lack of cold chain infrastructure.

Some of the problems that are to be mentioned in Indian food supply chain are the presence of numerous stake holders which are working in isolation and the infrastructure connecting these partners is very weak. There is lack of demand estimation and technology applications such as cold chain logistic supply chains and product tracking and tracing. Lack of system integration along with the presence of large number of unorganized retailers may result in making unorganized supply chain practices further inefficient.

### COLD STORAGE

Due to diverse agro climatic conditions and better availability of package of practices, the agricultural production is gradually rising. Although, there is a vast scope for further increase in the production, the lack of cold storage and cold chain facilities are becoming major bottlenecks in tapping the potential. The cold storage

facilities are mostly for a single commodity like potato, orange, apple, grapes, pomegranates, flowers, etc. which results in poor capacity utilization.

However, government is taking initiatives for developing an infrastructure for cold storage facilities by providing financial assistance to states according to their requirements. The following graph depicts the top 10 states, which availed the financial assistance for cold storage facilities during 2013-16.

It is reported that only 10%-11% of the fruits and vegetables produced in India use cold storage. Storage capacity needs to be increased by 40% to avoid wastage. There is more wastage of fruits and vegetables in the southern and western regions of India due to the tropical and humid climate.

### CONCLUSION

Today, consumers expect protection from hazards occurring along the entire food chain. Providing adequate protection to the consumer by merely sampling and analyzing the final product is not possible, hence the emphasis is on introduction of preventive measures at all stages of the food production and distribution chain. This calls for a determined, innovative, inclusive and participative approach from all stakeholders that are involved in food chain, from farm-to-fork. Not only is the responsibility of providing safe food to consumers of critical importance, the responsibility itself needs to be shared equally at every stage of the value chain, starting from the first steps of food production.



# DELIBERATIONS



**A**griculture is India's third largest industry employing almost half the country's working population and accounting for 18.1% of GDP. On the whole, it is not widely organized and relies heavily on small growers, transporters and traders to supply both domestic and export markets. Thus, India offers a wealth of opportunity to the food industry. However, as a developing nation, its food safety, quality and supply chain management issues are now coming into focus. In order to discuss the various challenges and way outs for the same, a national round table on "FOOD SAFETY, QUALITY AND SUPPLY CHAIN MANAGEMENT" was organized by Indian Council of Food and Agriculture (ICFA) on March 22, 2017 at India International Centre, New Delhi. The main purpose was to provide a platform to private players, government officials and heads of research and academic institutions to interact face to face and talk over the issues, challenges and regulatory framework and steps required in the same direction.

The conference was chaired by **Mr. Ashish Bahuguna**, Chairman, FSSAI and co-chaired by Mr. JP Meena, Special Secretary, MoFPI. The event was graced by the guest of honor Prof. MS Swaminathan, Father of Green Revolution in India and Founder, MS Swaminathan Research Foundation. In all forty six esteemed executive members of Government associations, scientists along with policy makers and corporate heads were present for the brainstorming session.

**Mr. Alok Sinha**, Director General- ICFA, welcomed all the participants and expressed gratitude to Prof. Swaminathan, for his benign presence in the event.

**Prof. M.S. Swaminathan**, Founder, MS Swaminathan Research Foundation, in his opening remark underlined some of the challenges in the food safety, quality and supply chain management. He talked about the presence of micro toxins due to high moisture content in food, which poses a major challenge for the food safety and



quality. He also addressed the need to pay attention to the nutritive content of food, as malnutrition among people has been increasing in India over the years, especially in women and children. Relating to the issues in the supply chain management, he threw light on the storage issues along with the security issues of supply. However, he also recommended some of the measures to combat the above mentioned challenges. He suggested developing genetic gardens for bio-fortified plants along with the establishment of 50 storage facilities with one million ton capacity each. He also mentioned about the smooth working of the dairy sector in India with consortium of public sector, private sector & cooperatives and suggested similar can be done in all other sub-sector of agriculture sector.

**Mr. Ashish Bahuguna**, Chairman, FSSAI, briefly stated the role of FSSAI as per the food safety act of India and stated that FSSAI can resolve food safety issues at only post production stage. However, there are cultivation practices being followed, which result in contaminated produce, resulting from the focus on increasing production and productivity, since independence, due to the need of survival. He also addressed the problem of acute malnutrition along with the food & water borne diseases, which account for nearly 50% of the diseases in India. Also, he mentioned that the agriculture sector is highly unorganized in nature, thus, there is a need to see how quality issues can be addressed in the unorganized sector rather than focusing on the organized agricultural sector. He recommended taking safety measures at the production stage along with the establishment of

linkages between intermediaries and consumers so as to maintain stability in supply chain as well as price of the products. He also emphasized on producing more from less resources due to decrease in the availability of land along with other resources. According to him, consumers are willing to pay a slightly premium price for better quality of product and industry is well aware of this fact, thus they need to work in the same direction and shift to high quality products.

**Mr. J.P. Meena**, Special Secretary, MoFPI, talked about the income of farmers, food quality, storage and transportation infrastructure. He opined that income of farmers can be increased only by value addition rather than increasing the farm production. He brought to the notice that India is importing approximately 40% of the tomato pulp as the tomato produce in India contain high water content rather than pulp, which is not suitable for processing. This is because food quality has not been prioritized till now. Further, he recommended for mechanized harvesting, which plays an important role in the quality and shelf life of the product. He also mentioned about the focus of food processing companies and aggregators on profit rather than food quality, which needs to be addressed. Along with the above mentioned points, he also talked about the protocol for storage infrastructure and transportation standards for each crop being produced.

**Mr. A.P. Karuppiah**, President, Tamil Nadu Banana Federation, emphasized on the education farmers relating to three sectors, namely, production techniques and skills, storage of produce and quality standards to



be maintained for the crops produced.

**Dr. R.M. Lakshmanan**, Panel Consultant, SFAC, GOI discussed that the focus shall be on Extension Services to take home the message of Food safety to the masses. This calls for Dissemination of information to the grass root level through Training and sharing of Knowledge through Seminars & Symposiums. In this context, the Promotional bodies of the Government could be requested to prioritize this component under their promotional schemes and arrange to sponsor/participate in the programs. Similarly, the CSR component of the Private and Public Sector could very well be used to create awareness. The CII could be requested to address this issue as well.

**Dr. Ajit Kumar**, Vice Chancellor, NIFTEM, addressed two major concerns, namely, quality insurance at every stage of supply chain and entrepreneurship possibility. Talking about the quality insurance, he stressed on educating the farmers relating to the quality standards to be maintained and provide them with a chart, which states the content of fertilizers, pesticides and etc. for every crop along with formulating and implementing good transportation and storage protocols. According

to him, there are large possibilities of various kinds of entrepreneurships in this sector, such as:

- Farmers need to become entrepreneurs.
- Training institutes for farmers.
- Entrepreneurs for building storage facilities.
- Entrepreneurs for development of new products from the existing produce.
- Food quality testing authorities.

He also mentioned about educating the SMEs as if promoters know the importance of food safety and quality, they will be able to create awareness among individuals.

**Ms. Seema Chandra**, Sr. VP – Food & Beverages, Sagar Ratna, stated that they are largely involved in fresh food as of now, and does not use frozen food. She also mentioned that, they maintain a quality check and buy food only after getting the sample of the food tested from the food quality testing laboratories. But, they face the challenge regarding the same as they deal in fresh food along with storage difficulties, as storage requirements for each food are different.

**Mr. Kumar Pranesh**, Branch Manager (North), ITC





Ltd. ABD, mentioned that it still remains a challenge to address the prevailing challenges regarding the food safety, quality and supply chain management. He recommended adopting the public private partnership model to combat the same.

**Dr. Harsev Singh**, CEO, Reliance Dairy Foods Limited., stated that the dairy sector in India is extremely systematic business, which is highly fragmented and most perishable commodity. Thus, by studying the structuring of the sector, learning can be applied to other agricultural products as per requirements.

**Mr. Rajeev Batra**, Group Head – Corporate Affairs, Hindustan Unilever Ltd., introduced the operating sectors of Hindustan Unilever Ltd., and mentioned about the science that is used to make a food product. He also showed a major concern of addressing the issues prevailing in the food industry relating to food safety, quality and SCM.

**Mr. Ashok Kumar**, DGM (Procurement), Mother Dairy, mentioned the operational segments of the company and stated the challenge relating to food quality check faced by them as they need to rely on the third party processing units, especially in milk. He acknowledged the elaborated norms and standards laid down by FSSAI, but also specified that their implementation is not up to the mark. Thus, he recommended to device strategies for the same along. At last he also advised to design a logo for GAP certified products.

**Dr. Sohrab**, Managing Director, Quality Care, briefly discussed about the food safety at the pre-production stage and certification of GAP. According to him, people are not getting GAP certified, in spite of numerous certification bodies present in India. He also emphasized on three components, which need to be addressed, for the same are:

- Regulatory Mechanism
- Incentives for certification
- National food surveillance system

**Mr. Oliver Mirza**, Managing Director, Dr. Oetker India Pvt. Ltd., opined that Indian consumers need to get ensured about the products they are being sold. They need to be assured that products quality and ingredients vary as per the market demand and tastes & preferences. He also mentioned about the increasing demand for low-fat/ fat-free products, but there is no







legal framework under which companies can operate for the same.

**Dr. Saurabh Arora**, Executive Director, Arbro Analytical Division, talked about awareness and education about food safety and quality among individuals. He also brought to the notice that there is a need for inspection of food products and empowering consumers by providing them with the facts and test reports. He recommended providing education to farmers and other people working in the sector, by specific sector guides, not in English but also in vernacular languages. According to him, harmonization and interpretation of regulations is very important, especially for SMEs and cottage industries.

**Mr. Mithun Sundar**, Senior Director – Strategy, PepsiCo India, threw light on the need for developing an ecosystem for rise in the agricultural income. He also mentioned about high production levels and few food processing units in India. Thus, he recommended to establish cold storage units, but also stated that no authority/organization holds the project.

**Mr. Navneet Mehta**, Head – Manufacturing Quality – South Asia, Middle East & Africa, GSK, stated that their company majorly manufacture horlicks and boost in various flavors and horlicks is highly depended on

agricultural products. He mentioned the processing and transportation challenges faced by the company for the same. Also, he specified, the need for making quality mind set.

**Mr. R L Goyal**, CEO, Superchem Nutri Formulations, mentioned that nine categories of health food are stated, but are not clearly understandable. Thus, in his opinion, FSSAI should make a help desk, especially for FBOs so as clear their doubts. He also drew attention of the house towards the huge shortage of medical foods in India.

**Dr. Subodh Jindal**, Former President, AIFPA & Chairman, briefly talked about the need for inter-ministerial approach so as to address various issues relating to various ministries or authorities. According to him, there is a need to synergize and have a interdisciplinary team to fight the issues.

**Mr. Siraj Chaudhry**, Head, Cargill Foods India, briefly mentioned about the lengthening of the food supply chain, over the years. Thus, there is a need for change at the farm level. Farmers need to know what to produce and how to produce efficiently and effectively. Along with this, there is a need to create awareness among people as there is a change in the food consumption pattern in India. People have shifted

from homemade food to eateries and food booths due to migration from hometown to other places for livelihood. Therefore, income bracket of individuals drive the thought process regarding the preference for quality food products.

**Mr. Senthil Natarajan**, MD, Kovai Pazhamudirnilayam, Tamil Nadu, talked about the demand for agricultural products. According to him, if the difference in the quality of products is shown to the consumers, they will buy the product, even at a slightly higher price. He also mentioned about the high cost of transportation, which results in high price for the product. He requested government to take some initiatives in the same direction.

**Dr. P.K. Vats**, Vice President – Food Safety, Arbro Analytical Division, mentioned some of the issues regarding labeling, which are still unanswered.

**Mr. Rajesh Kumar Gupta**, DGM (QA), Bikanervala Foods Pvt. Ltd., emphasized on the limitation relating to the FSSAI licensed transportation system.

**Mr. Ashish Bahuguna**, Chairman, FSSAI, in his closing remarks, clarified that FSSAI is not a one stop solution for everything relating to food safety, quality & SCM and have certain limitation, such as FSSAI does not have access to the adequate data regarding food contamination, which industry is withholding with it. Thus, he recommended the industry to share the data with FSSAI for the mutual benefits. He also mentioned that FSSAI is in the process of developing food surveillance system and drafting labeling regulations. He threw light on the appropriate nutritive content required by the plants to grow and produce the crops.

At last, Dr. MJ Khan, Chairman ICFA, briefly talked



about the quality of raw material to be maintained while preparing the food, which needs to be addressed. He revealed about the launch of Working Group on Eco-Agriculture for safer food production and also obtaining the provisional GAP Certification. He also mentioned about ongoing discussions for the launch of healthy food initiative, nationwide, which will address food safety, quality and affordability issues.

Finally, the formal vote of thanks was presented by Director – Corporate Affairs, ICFA, Ms. Mamta Jain, who put into words the kind and gracious presence of Prof. Swaminathan and obliged the audience with his treasured remarks. She expressed gratitude to Mr. Ashish Bahuguna, Chairman, FSSAI and Mr. J.P. Meena, Special Secretary, MoFPI for sparing their valuable time and gracing the conference. She also thanked all other dignitaries for active participation and making the discussion worthy.





# MAJOR RECOMMENDATIONS

1. The incidence of food borne diseases is increasing and international food trade is disrupted by frequent disputes over food safety and quality requirements. Thus, there is a need to resolve safety and quality issues at every stage i.e. pre-production, production and post-production. Therefore, it is imperative to sensitize and train farmers about food safety standards and adhering to same while crop production and storage through specific training programmes designed and implemented with KVKs. Moreover, SMEs should also be trained about food safety standards, so as to ensure that safe food enters the marketing chain.
2. In order to ensure quality of food, the cultivation practices adopted by farmers need to be relooked and awareness to be disseminated among farming community to enhance food quality and fetch good price for the produce. Pick and drop harvesting of mango reduces shelf life of the fruit, which is also affected by the length of stalk attached to it. Also, mechanized harvesting improves the quality of produce. In accordance, an awareness drive should be initiated to make farmers aware of the benefits of mechanization and other measures to improve quality of the produce.
3. To ensure safety of perishable farm produce from spoilage during transit to the processing units, cold chain is very important, including storage capacity and reefer trucks. Therefore, besides training farmers for food safety and quality, awareness among transportation personnel is a prerequisite for quality food to reach at destination because inadequate storage and temperature during transportation would result in loss of quality of the produce. It is hereby submitted to initiate a short term diploma course for transporters to obtain license for perishable commodity transport business.
4. FSSAI's step to categorize food products available in market under 9 categories is a roadmap for success of industry. Though to complete the process, certain clarifications are required by the industry. The FSSAI should come up with distinguishable specifications for each category of products to avoid confusions. Further, a help desk or redressal window is necessary to clarify the doubts for timely completion of the activity.
5. Agriculture pattern in the country is based on chemical pesticides which lead to extremely harmful residues. The government has to work rapidly to develop natural pesticides and promote their use all over the country so that the menace of chemical pesticides can be stopped. Further, Awareness among farmers about GAP certification and implementation will result in better quality produce in market. An awareness drive need to be commenced to convey its benefits and process for better facilitation of GAP as well as its adoption.
6. As market is governed by demand and supply, and demand would lead to flow of commodity in the market. In light of this principle of economics, awareness among consumers about safe and quality food will create the demand in the market, leading to a shift in paradigm. Therefore, awareness of consumers is equally essential and it is hereby suggested to launch an awareness campaign to promote safe and quality food among consumers.
7. As majority of players in food and agriculture sector of the economy belong to unorganized sector, hence government should devise a strategy to convey and aware this unorganized part of the sector about food safety and quality for larger benefit to population.
8. A large percentage of food is being consumed outside homes due to migration of people for work, while the well off consumers go to medium to high end eateries, the poor class fulfills this need through street food. Hence creating food safety standards and awareness amongst operators and consumers on maintaining hygiene and food safety is important and can be a shared role between government and private sector.
9. Food is a chain activity and it is important to address the issues appearing along the entire chain. The initial steps which require improvement are postharvest handling, ambient controlled field storage, and primary processing including sorting, grading, cleaning, and preparing for transportation, all these activities should be promoted at cluster level for better traceability. Also, infrastructure related to Collection Centers and Mandies need to be drastically improved. Farm produce is often damaged at collection centers and mandies owing to bad handling and delays.
10. Moreover, there is a need is to develop safe packaging materials for food, so that plastic packaging can be phased out.



# LIST OF PARTICIPANTS

1. Prof. MS Swaminathan, Founder, MS Swaminathan Research Foundation
2. Dr. Ajit Kumar, Vice Chancellor, NIFTEM
3. Dr. Saurabh Arora, Executive Director, FSSAI Helpline
4. Mr. J.P. Meena, Special Secretary, MoFPI
5. Mr. Siraj Chaudhry, Head, Cargill Foods India
6. Mr. Ashish Bahuguna, Chairman, FSSAI
7. Dr. Sohrab, Managing Director, Quality Care
8. Dr. Subodh Jindal, Former President, AIFPA & Chairman
9. Mr. Sunil Kumar, General Manager, Amira Foods
10. Mr. Ankush Sharma, Founder Director, Sattviko
11. Dr. P.K. Vats, Vice President – Food Safety, Arbro Analytical Division
12. Mr. Rajesh Kumar Gupta, DGM (QA), Bikanervala Foods Pvt. Ltd.
13. Mr. Pinakhi Suvadashini, Deputy Manager, PMV Maltings Private Limited
14. Ms. Seema Chandra, Sr. VP – Food & Beverages, Sagar Ratna
15. Mr. Rajiv Jaisinghani, Managing Director, Darshan Foods Pvt. Ltd.
16. Mr. Sanjeev Saxena, Assistant Vice President – Supply Chain, Jubilant Food Works Ltd.
17. Mr. Harsh Vardhan, Process Head - Sugar, DCM Shriram Ltd
18. Dr. Harpal S. Sangwan, Farmer, Right Activist
19. Mr. Shiv Kumar, Principal Scientist, National Institute of Agriculture Economics & Policy Research
20. Mr. Yudhvir Singh, General Secretary, Bhartiya Kisan Union
21. Mr. Mohit Bansal, Associate Director – Public Policy, Amazon
22. Mr. Sunil Kumar, General Manager, Amira Foods
23. Mr. Upinder Singh, ITC
24. Dr. Raman, MS Swaminathan Res. Foundation
25. Mr. Oliver Mirza, Managing Director, Dr. Oetker India Pvt. Ltd.
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31. Mr. Gulshan Kalra, Director-Public Affairs, Coca-Cola India Pvt. Ltd.
32. Dr. Harsev Singh, CEO, Reliance Dairy Foods Limited.
33. Mr. R.L. Goyal, CEO, Superchem Nutri Formulations
34. Mr. Sanjay Sailas, GM – Business Development, Mohini Tea Leaves Pvt. Ltd.
35. Mr. Senthil Natarajan, MD, Kovai Pazhamudirnilayam, Tamil Nadu
36. Mr. A.P. Karupiah, President, Tamil Nadu Banana Federation
37. Brig J.S. Oberoi, Associate Director, LT Foods Limited
38. Mr. Kumar Pranesh, Branch Manager (North), ITC Ltd. ABD
39. Dr. R.M. Lakshmanan, Panel Consultant, SFAC, GOI
40. Mr. R.S. Dixit, CMD, Ananda
41. Dr. A.K. Gupta, Director – BEDF, APEDA
42. Mr. Rajeev Batra, Group Head – Corporate Affairs, Hindustan Unilever Ltd.
43. Dr. MJ Khan, Chairman ICFA
44. Mr. Alok Sinha, Director General, ICFA
45. Ms. Mamta Jain, Director – Corporate Affairs, ICFA
46. Dr. Sucheta Arora, Director – Organization & Knowledge Management, ICFA
47. Dr. Priyanka Sarkar, Vice President, Programs and Policy, ICFA





**भारतीय कृषि एवं खाद्य परिषद्**  
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