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Health, Hygiene and Food Safety Standards in India

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Abstract: ***Food safety is an authentic human requirement. Guaranteeing it for present and future generations to sustain human life with better quality, a safe food supply of adequate quality will play a significant role. The food must not adversely affect the health of consumers. It should be a prime concern to ensure the safety standards of food products that are presented into the market. Worldwide, food-borne diseases are a major health burden leading to high morbidity and mortality. Therefore, strengthening of food sector by successfully implementing various rules and regulations such as Hazard Analysis and Critical Control Points (HACCP) can help to get fruitful results. Food Safety and Standards Act (FSSA) was established in India to assimilate the food safety laws, so that food processing and manufacturing industry can re-orient itself from regulation to self-compliance by running in an organised and scientific way [4].Also, there is utmost need to upgrade various food safety laws. Unfortunately, there is a need to fill the gap between implementation and enforcement. Fortunately, media is also playing a very important role in spreading awareness regarding food borne illness and government is also participating and organizing actively some training programmes as well as certifications for food vendors, individual homes, schools and food manufacturing units thereby ensuing good quality and prevention of hazards throughout the production process. This is so because adequate food for all mankind is the first essential component of social justice.***

Keywords: Food and hygiene, safety, industry related laws, food safety standards and guidelines, Food Safety and Standards Authority of India (FSSAI), Hazard Analysis and Critical Control Points (HACCP)

I. OBJECTIVES OF RESEARCH

A. To study guidelines, laws and enforcement protocols of food industry in India
B. To studies the impression and importance of food hygiene and safety practices in India.

II. RESEARCH METHODOLOGY

This study is based upon Exploratory Research Technique on existing data. The secondary data is collected from credited sources like Internet white paper(s), international journals, published articles, reports and surveys. Collected data is evaluated and analysed to reach the conclusion.

III. INTRODUCTION

Food functions as an indispensable component to fulfil hunger and it serves beyond the boundary of gastrointestinal tract by fulfilling the biological needs as it incorporates an integral part in popular pyramid, depicting hierarchy of needs, which was developed by Abraham Maslow. With continuous changes in human eating behaviour due to tiring lifestyle, mushrooming of restaurants and other ready to eat fast-food outlets is expressively increased in past few decades. The street food industry is very popular in cities of various developing countries across the globe. It is projected that per day consumption of street-food in urban consumers of developing nations is up to 40 percent[1]. Ministry of food and agriculture and the World Bank 2007 quoted that among every40 Indian suffer serious food borne illness per year and 420000 cases are reported with an annual death rate of 65000[2].The concern is more noticeable in these countries due to lack of awareness and inadequate food handling & sanitation practices, insufficient food safety laws, weak regulatory system, deficit financial resources to invest on safer equipment and education for food handlers. Ready-to-eat and tinned food is conveniently available on the streets compromising safety, quality and hygiene aspects. Osaili et al. in his study identified several factors associated with food borne illness such as poor food safety knowledge, ignorance of personal hygiene, cross-contamination as casual approaches adopted in time and temperature maintenance during storage and preparation of food by mobile food handlers. Therefore, food supply chain that delivers food from the smallholding to the dinner table is tended to obligate for improvement at each stage. This can be best achieved by implementing a systematic preventive approach to food safety known as HACCP. The HACCP system plays an important role in reduction of food-borne diseases and it acts as a global reference in terms of food safety control. It is endorsed on a global platform by World Health

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Organization, International Commission on Microbiological Specifications for Foods, Codex Alimentarius, and food regulatory agencies across various republics[3]. The food safety and standards authority of India launched under Food safety and standards Act 2006 has been enforced to monitor food safety and hygiene standards establishing and distributing responsibilities in various regions and laboratories across the country.

IV. THE FOOD SAFETY ACT AND AUTHORITIES

The Food Safety and Standards Act was passed by the parliament on August 23, 2006. This act was established to combine the laws related to food and to lay down the foundation of Food Safety and Standards Authority of India (FSSAI) to set the proven standards for different food articles regulating the process from its manufacturing and sale(s) or import till it finally reach the consumer. The main objective of this law is to ensure the availability of safe, healthy and nutritious food for human consumption along with concerns associated or incidental thereto. In 2008, Food Safety and Standards Authority of India was mandated by the Food Safety and Standards Act 2006. As quoted earlier, the intension of this act was to consolidate the food safety laws, therefore, the act assimilates nine existing ministries related to food safety. FSSAI mainly performs the following functions [4]:

A. Strategizing regulations to set the standards and guidelines for food articles and stipulating a suitable system of implementing these standards.
B. Articulating procedures and guidelines for food businesses for authorization of certification entities involved in certification of food safety management system.
C. To chalk out guiding principles and techniques for certification of laboratories and notification of the authorized laboratories.
D. To act as a scientific advisor and to provide technical support to Central and State Governments in the matters of framing the policy and rules in areas which have a direct or indirect bearing of food safety and nutrition.
E. Data collection and then its organisation regarding food consumption, incidence and prevalence of associated primary risks, food contaminants, identification of evolving risks and introducing rapid alert system accordingly.
F. To create an information network about food safety and concerned issues in country to provide instant, reliable and objective information to people, consumers and Panchayats.
G. Provide training programmes to persons doing food businesses.
H. To contribute in developing international technical standards for food, sanitary and phytosanitary measures.
I. Encouraging people about food safety and food standards.

V. ROLE OF HACCP IN INDIA

HACCP is identified as a very important component in food safety management system as it works on controlling food safety hazards and targets to control Critical Control Points (CCPs) during food handling for prevention of food safety problems (microbiological, chemical and physical contamination in food supply chain) instead of keeping reliance on end product inspection and testing.

In India, a National Centre for HACCP Certification (NCHC) has been established in Kerala. It mainly works on developing a team of experts to ensure food safety systems, provide guidelines to food industry and consumers and accelerates the action plan of government to make India free of food safety issues [5]. Moreover, NCHC also organises various awareness workshops, training programmes on HACCP System and emphasizes to design, implement, examine and authorisation in such a system in compliance with 'The Codex Principles of Food Hygiene and Application of HACCP' in small-scale food businesses.

The HACCP system can be applied throughout the food supply chain from the manufacturer to the customer. A properly implemented HACCP System offers a number of benefits such as

A. Effective resource-use.
B. Savings to the food industry.
C. Taking appropriate actions on time to prevent food safety hazards.
D. It motivates food handlers to actively participate in various activities which help in better understanding about food safety.

On top of this, Food Industries and several Food Control Regulatory Agencies from around the world have shown their interest in implementing HACCP System. Therefore, considering the benefits and importance of HACCP in food safety, it is very important in today's era of increased food globalization to facilitate a system that promotes greater food safety and awareness among people.

VI. CHALLENGES ENCOUNTERED

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High quality regulation and an influential enforcement plays a vital role in proper functioning of society. A regulation can be effectively implemented if explained in a user-friendly way, which makes it easy to understand, accept and support. But unfortunately, still there is a lot of work to do for this. In May 2010, Confederation of Indian Food Trade and Industry (CIFTI) conducted a survey in which the concern was raised about understand ability of regulations that and by the result of that survey, a very surprising outcome was obtained as about one fourth of industry (27% of respondents) felt that regulations are not easy to understand and follow [6].

Although India is having a legal framework but still major problem encountered in execution of food safety standards is outdated infrastructure and less number of laboratories in the country as compared with other countries like U.S. and China[7].

Similarly, street vended food being an easily accessible and attractive source of food is also emerging as a challenge while heading towards food safety because it is difficult to control rapidly increasing number of street food vending operations accompanied by fragmented food industry with its diverse and mobile nature. Street vended food and public health are directly related to each other. Additionally, they lack few basic services like water and toilets at their vending sites and have poor knowledge about basic food safety measures. Poor basic knowledge and inadequate public awareness of hazards caused by street food is the root cause behind emergence of new challenges in food safety.

Eventually, globalisation of food is also intensively increased on a large scale from past few decades. Even though it offers benefits for the growth of Food Industry, but at the same time, it is responsible for negatively impacting the health of consumers. Now days, with increased demand of different food items by the consumers, food is also transported from one country to the other. It promotes to blowout various food-borne illness. Some recent examples are bird flu, human pathogens and antibiotic residues in sea food and poultry. Food safety could also worsen due to climate change, antibiotic resistance, and veterinary& pesticide residue, uncontrolled use of pesticides and unfinished agendas of poor nutrition, sanitation and safe water [8].

World Health Organisation (WHO) is also involved in food safety. As per quoted by WHO in 'Strategic Plan for Food Safety including Food borne Zoo noses 2013-2022' WHO mentioned that enforcing updated standards in future requires a highly controlled food chain supplied with appropriate data on contaminants, threats and risk management approaches.

VII. FUTURISTIC ROADMAP ENSURING STANDARDS

Seeking the future of food safety in India, FSSAI also united with the Global Food Safety Partnership (GFSP) to develop actions for investments for food safety in Asia. Its focuses to create a way which ensures the availability of safe and nutritious food for all through co-operative activities. Moreover, GFSP will provide technical support to FSSAI intended to create a detailed assessment of training requirements of food safety workforces' in India. In short, GFSP supports developing countries by improving their food safety system as it uniquely offers food safety training and technical assistance. On 21st February 2017, the Governing Council (GC) members of GFSP had a meeting with FSSAI, investors, industry majors like CEOs of Nestle, Patanjali and other participants of food safety in India, where the GFSP Chairperson, Dr. Nathan Belete appreciated the interest of Indian stakeholders in advancing food safety agenda. Additionally, FSSAI is also making efforts to set an ideal example of food safety monitoring system in India accompanied by increased global trust. For this purpose, FSSAI has also collaborated with some other food authorities in developed countries such as US, Canada.

Bearing in mind, the importance of safe and hygienic food for all, FSSAI illustrated the roadmap for the future which includes each part of the Food Authority. More attention is paid on developing easy to understand food safety documents, identification of emerging issues, food safety compliance, empowering the network of food safety laboratories and single food safety administrator in every business [9].

VIII. CONCLUSION

Indian food industry has significantly developed from past few years but there is more space in the court of improvement in terms of awareness and implementation of the laws. Still India is facing general challenges like ignorance to incorporating regulations and hence they are not yet fully enforced. Considering all the health and economic impacts of food on society, initiating efforts to increase awareness about food safety among food handlers and consumers is essential to minimise detrimental effects on health of individuals. Street food vendors must be regulated, governed and skilfully trained. Regulation-explanatory memoranda and guiding principles for food safety should be made user-friendly to maximise awareness and participation among people as well as for better compliance. Food safety is a participatory approach, which means nothing for us is possible without us. Therefore, every step initiated in food supply chain should be carefully handled. Updated infrastructure, effectively implemented policies and bridging the gap between implementation and enforcement of regulation are some of the important keys that are potentially desired to improve

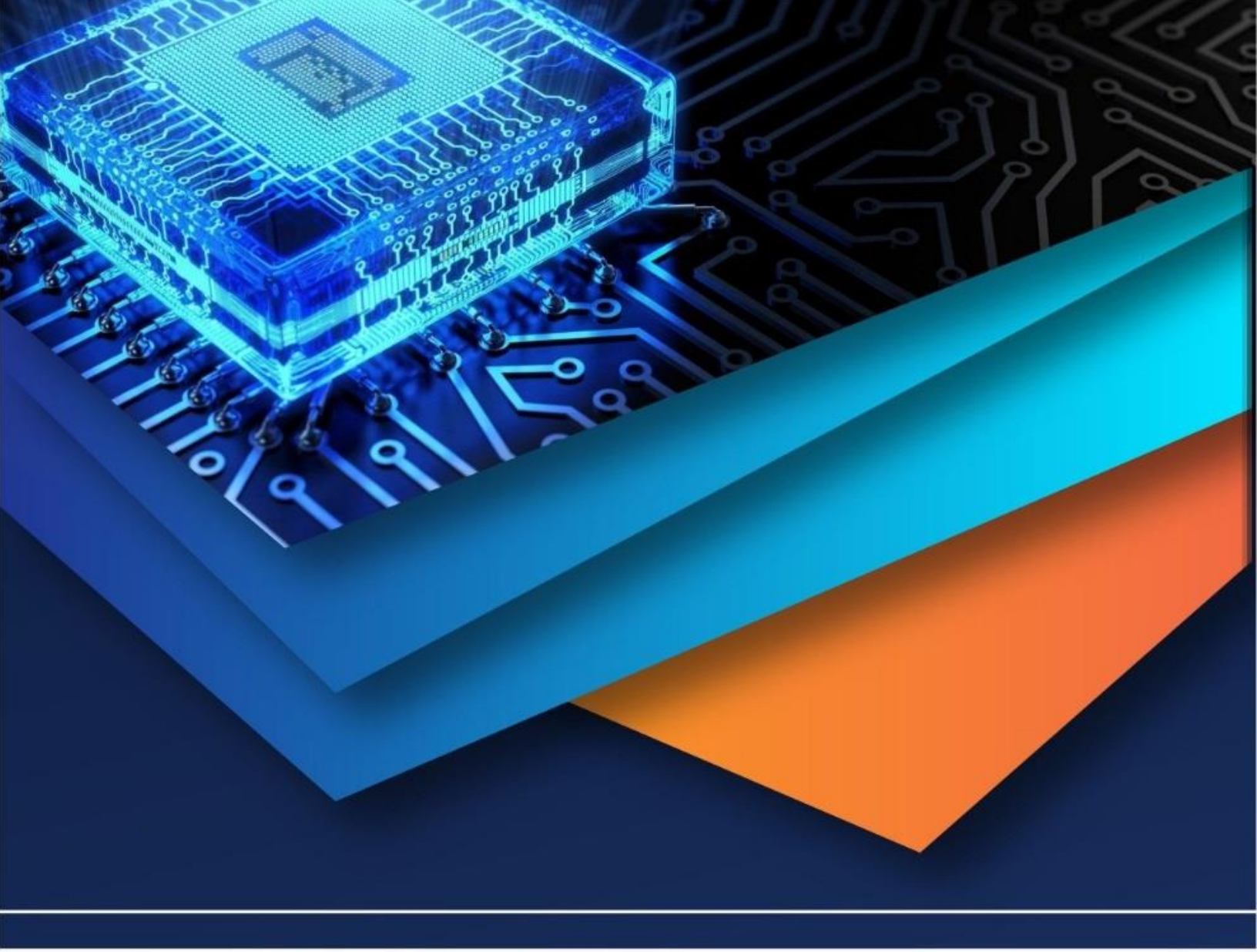
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food safety in India. Knowledge and good hygiene practices should be adopted by food handlers and to achieve this, collaborative action of various local bodies, government, media and Non-Governmental Organisations (NGO) can play a significant role. Moreover, new technologies should be incorporated in food industry only if they fall in line with food safety. Greater attention should be given towards using regional or global network of scientists to ensure food safety instead of duplicating risk assessments. Joint-efforts of Global Food Safety Partnership (GFSP) and Food Safety and Standards Authority of India (FSSAI) reassure the safe future of food safety practices to maintain the higher degree of hygiene and hence the public health in India.

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