

# Research & Reviews: Journal of Food and Dairy Technology

## Food Safety Evaluation and Food Waste Management – An Indian Perspective

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### EDITORIAL

Received date: 13/04/2015  
Accepted date: 20/04/2015  
Published date:19 /06/2015

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**Keywords:** Global Food Safety Initiative (GFSI),  
Food Waste, Food Recycling Index, Design,  
Growth, Acidification.

#### ABSTRACT

Food safety is nothing but utilizing various resources in order to ensure that all types of foods are properly started, prepared and preserved. Hence, they are safe for consumption. Internal auditing should be conducted on a repeated to make external auditing a smooth running process. The priority should lie in maximizing food sales, and giving away or selling foods past their prime involved risks that may undermine sales. Times have moved on towards reaching perfection with technology being updated almost every passing hour in the twenty four. This brings to a logical conclusion that there're many great ways through which we can reduce the total food waste through innovation and research as it gives us a chance to take the best available quarantine measures in preventing spoilage and wastage of food. We should only target on producing food when necessary and it's our duty to ensure 'tis decrement of over production. Producing food and generating efficient waste invariably and internally contaminate the environment. The present study discusses about the Food Safety issue, emphasizes the need of international food safety standards and their implementation in the food processing units to ensure the maximum safety and presses on the importance of effective waste management.

### INTRODUCTION

Food, shelter and clothing are the basic needs of human beings to lead dignified human life. Let me discuss here 'food' and 'management' as I am enthusiastic about research on food waste management and a self-assessment questionnaire in controlling food waste management. The "WH" questions (what, why, where, when) are important in gathering information about anything. This is no exception to any area. Food safety can be probed with these questions.

Food safety is nothing but utilizing various resources in order to ensure that all types of foods are properly started, prepared and preserved. Hence, they are safe for consumption. Practicing and implementing a safe level of food sanitation starts with the acquisition of different food items and ends with proper storage of leftovers for future use. Off late, many sectors in the food supply chain across the globe have developed certain to assure the safety of the products. An essential pre-requisite for an internal industry scheme or schemes, is the urgent need to harmonize international standards <sup>[1-10]</sup>.

Food safety regulations and the perception of risk are different among countries and these even reduce food trade. Although little disruption to trade has occurred for food safety reasons, trade issues or risks related to food safety are wide ranging. These issue and crisis challenge policy makers and industries to both protect domestic food supplies and nurture internal markets. Risk

reduction measures and quality certification programs can not only pre-vent food safety crisis, but can better position exporters in emerging overseas markets <sup>[11-25]</sup>.

The Global Food Report by the Institute of Mechanical Engineers has says, there could be a whopping three billion to be fed with food by the end of this century. In that period, one can expect great changes in the areas of wealth, calorific intake and dietary preferences of people in developing countries across the globe. Hence, it lies in our hands to focus in producing food in safer quantities by availing the best technologies at our hand.

A large diversity of food quality and safety standards, both public and private now exists in western countries. For developing country producers, this variety of standards makes demands from western customers highly in-transparent, making it very difficult for these parties to develop trade relationships with western customers and even more difficult to take dynamic positions in supply networks because standards and related demands might change from transaction to transaction <sup>[26-35]</sup>.

Friedmann <sup>[36-45]</sup> said that, “New agricultural economies”, with export oriented supply chains are reliant on high-value markets in developed countries and production system. The proliferation and evolution of food safety and quality standards in industrialized countries, driven predominantly by the ‘ratching-up’ of regulatory requirements in response to consumer concerns about food safety and qualities, scientific developments regarding the risks associated with food and concerns over the commendable economic costs associated with established food borne hazards, has received much attention in the academic literature <sup>[46-55]</sup>.

Hence, the researcher got interest to see the levels of safe food and the latter’s effective waste management in Indian perspective.

## **METHODOLOGY**

The present work has been carried out with a view to study the food safety standards and to analyze the waste management of food. For this study, extreme literatures were studied on Food safety, Global food standards and Food waste management and are then interpreted in a manner to emphasize the beneficial effects. This study did not use quantitative research. Therefore, there was no statistical data.

Case studies have been used in the report and the approach to research was mainly on employing as many sources of evidence as possible to corroborate potential trends. We have tried to eliminate any misleading inferences about the efficacy of our area of interest. We have ensured that much time will not be spent on preparing questionnaire and bluntly putting it, as we felt that the results are not important. With the information that’s gathered, we understood that it is necessary to include surveys. Case studies in this study were included as they give clear information and understanding through observation unlike any other data <sup>[56-60]</sup>.

## **SUMMARY AND CONCLUSION**

This study, in short, can be summarized with reveling information on Global Food Standards and their ever lying importance in successful implementation. Should any manufacturer wish to implement any global certificate of Food Safety Standard, he / she is advised beforehand to look at pre-programs in like, Good Manufacturing Practices, (GMP), Good Hygiene Practices, (GHP), Sanitation, Packaging regulations, Education, Training, Consumer interactions and Feedback.

Detailed Information and effective maintenance of many global food safety standards is given in detail and its sole responsibility of the manufacturer to acquire this certificate should he / she wishes to expand their business to the global market. Internal auditing should be conducted on a repeated to make external auditing a smooth running process. Seconding the aforementioned information, it has been extremely pressing on the researchers and the personnel involved with the work to change the mind sets of producers, consumers and retailers regarding the advancement of food waste management methods and their coping with it. The priority should lie in maximizing food sales, and giving away or selling foods past their prime involved risks that may undermine sales.

That said “reducing the food waste is one heck of a target of this hostile present day world”. We should, however, understand that it is achievable on financial terms. More than that, we should change our age old perceptions about the morphology of the foods we eat. It has been understood that a large amounts of food waste in the United Kingdom and most of Europe comes from packaging alone. Educating the consumers and bringing changes to the supply chains will aid us well in solving this issue. However, there will be evidences where consumers dump the trash to avoid paying for the food waste management programs.

In one study, conducted in Taiwan by Anglea and Susana published in the Asia Pacific Journal of Clinical Nutrition revealed that local governments employ “reusable garbage separation plants” to sort and classify municipal solid waste and pressed on the fact, efforts to implement diversified kitchen reuse programs. Furthermore, as the study reveals, waste minimization is at the core of environmental sustainability, and is, certainly an area that is pertinent to health and food security. The FRI (Food Recycling Index), they say, is a methodological approach to assess recyclability within a food system, which is a vital strategy before a Zero Waste society is achieved.

Hence we should target reducing the proportion of the actual wastage of food (raw and whole). But, in the sub-continent, especially in the rural areas, raw food waste is generally dumped back to into the soil and is allowed to degrade naturally. Ironically, in the urban areas, the waste remains uncollected. Thanks to the modern-day technology and ever raising use of plastics, the

waste either remains unattended within the city limits, or will be found dumped just on the outskirts of the urban areas. This, in the recent times, has been causing a major havoc on the environmental front. Effective waste management here lies in collecting the waste systematically but not forcibly and ensuring that it's dumped at a common place. Not in the outskirts of the urban areas, not at the doorsteps of the rural areas, but, at a common no man's land where the dumping causes less pain to our air, environment.

Times have moved on towards reaching perfection with technology being updated almost every passing hour in the twenty four. This brings to a logical conclusion that there're many great ways through which we can reduce the total food waste through innovation and research as it gives us a chance to take the best available quarantine measures in preventing spoilage and wastage of food. We should only target on producing food when necessary and it's our duty to ensure 'tis decrement of over production.

However, I understand there in my chosen area of research, lies work in abundance to be done in order to evaluate and incorporate the initial phases of the food system. The agricultural sector, in the most recent times has had a major impact on environmental degradation, and it will keep having an impact in the near future, owing to the large contributions towards resource requirements, emissions and waste production. This brings us to addressing the food system of the present day and chalking out plans and proposals to modify it <sup>[61-65]</sup>.

We should, hence, march ahead towards adopting a holistic approach for food security and global health. The FSRI - Food System Recycling Index will best serve as an indicator of systemic sustainability in the near future. It is mainly concentrated on giving the whole picture of the amount of available food recycled in the acceptable levels of waste management. We should also understand that food and health security is not only concerned with lack of food availability. The environmental health and our well-being solely and surely depend on how efficiently we produce our food and how best we handle the associated wastes.

Lastly, to summarize the work I did, the present study has been carried out for a short period of six months and was submitted as a thesis towards receiving my Master's degree. Time and space have halted the extension of my research in the aforementioned area of food safety and hence could not delve into greater depths for identifying any further concerns and consequences of food safety waste management and coming up with a certain remedy, say, an effective food safety plan leading to an appealing food waste management in the country India, my present geographical location.

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