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Food Security and Safety in India

Dr. R. Vennila[1], Dr. A. Arunprakash[2]
[1]*Associate Professor, School of Commerce Studies, Jain Deemed to be University, Bangalore*
[2]*Assistant Professor, School of Commerce Studies, Jain Deemed to be University, Bangalore*

Abstract
Let food be your medicine, instead of your medicine being your food.
Hippocrates
Food is indeed a way of distributing risks, causing sickness and death, and a means of sustaining and enjoying life. Infections caused by contaminated food are the most common transmissible medical problem in the globe. Food contamination has economic consequences at all levels of society. Disease caused by consuming contaminated food results in the need for care, whether it be institutionalized or self-care, on an individual and group level. Income is missed due to illness, which is extremely difficult on breadwinners. Foodborne disease is the most dangerous side effect, and it can even be fatal. It's also severe, with serious socioeconomic and psychological consequences. Despite an increase in the occurrence of foodborne illness, many public health officials fail to acknowledge the worldwide significance of foodborne illness. Changes that directly influence sanitation and the human environment, on the other hand, will pose a greater threat to food safety. Population ageing, urban sprawl and migration, and mass food production due to population growth and changing dietary patterns are all examples. Both traditional and modern food safety techniques should be improved and implemented properly. Legislative measures should be employed where necessary, but voluntary compliance and education of consumers and professional food handlers should be prioritised. This will be a major undertaking for primary care.
Keywords: Food Safety, Food Security, Recent Developments

I. INTRODUCTION

Food security, according to the United Nations' Committee on World Food Security, is described as having physical, social, and economic access to sufficient, safe, and nutritious food that meets their food choices and dietary needs at all times in order to live an active and healthy life. Climate change, population growth, rising food prices, and environmental factors will all have significant but uncertain consequences for food security in the coming decades. Water allocation, land use patterns, food trade, post-harvest food processing, and food costs and safety are all critical adaptation methods and policies in the face of global change.

Figure 1
Food Safety vibe



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Although a clean and adequate food supply is essential for human survival, it can also put population livelihoods at risk from foodborne infections, which can be fatal. Food, in addition to providing nutrients, seems to have the potential to cause harm to a consumer. Microbiological pathogens, naturally occurring toxins, allergies, intentional and unintentional additives, changed food components, and agricultural chemicals are all hazards associated with food. As a result, food safety is required. Food safety is a scientific subject that explains how to handle, cook, and preserve food to prevent foodborne illness. This comprises a variety of procedures that must be followed to avoid significant health risks. To ensure consumers' health and safety, effective food control measures are required.

II. SIGNIFICANCE OF THE STUDY

Food safety is beneficial because it enables to prevent other people from foodborne illnesses and other ailments caused by food. When food safety is considered and prioritised, it safeguards the general public from health and even mortality concerns. Both importing and exporting countries have strong obligations under the new global food trade environment to upgrade their food safety systems and develop and enforce risk-based food safety strategies. Consumers are, in some aspects, taking an unprecedented interest in how food is produced, processed, and sold, and are increasingly calling on their governments to take greater responsibility for food safety and consumer protection. This includes developing strategies to strengthen food control systems in order to preserve public health, prevent fraud and deception, prevent food adulteration, and facilitate trade. They will devices to help figure out what kind of legislation, infrastructure, and enforcement procedures are best for their food safety systems. Food safety and food quality are sometimes used interchangeably, as food safety refers to any hazards, whether chronic or acute, that could cause food to be damaging to the consumer's health. Food quality incorporates all other factors that influence a product's consumer value. This distinction between safety and quality has important policy consequences and influences the structure and content of the food control system that is most capable of meeting the country's and its citizens' specified safety objectives.

Providing sufficient safe and nutritious food for everyone has always been a major worldwide challenge, and it remains so in the late twentieth century. The four elements of food security are food availability, access to food, food use/utilization, and food stability. Due to limited access to food and financial resources, those living in rural areas are the most vulnerable to food insecurity in all countries. As a result, it has been concluded that food safety and security are critical at this time. As a result, the researcher classified this issue as critical and investigated the government's food safety and security policies and activities to address the issues.

III. GOVERNMNET OF INDIA INITIATIVES

With food grain output increasing fivefold from 50 million metric tonnes in 1950-51 to around 250 million metric tonnes in 2014-15, India has moved away from reliance on food aid and it has become a net food exporter. In 2016, the government planned a series of policies aimed at increasing farmer income by 2022. These are intended to remove bottlenecks and increase agricultural productivity, especially in rain-fed areas. The National Food Security Mission, Rashtriya Krishi Vikas Yojana (RKVY), Integrated Schemes on Oilseeds, Pulses, Palm Oil, and Maize (ISOPOM), Pradhan Mantri Fasal Bima Yojana, the e-marketplace, and a vast irrigation and soil and water harvesting scheme are all part of a plan to raise the country's gross irrigated area from 90 million hectares to 103 million hectare.

The government has taken major initiatives to combat undernutrition over the last two decades, including the introduction of mid-day meals in schools, Anganwadi networks to supply rations to pregnant and breastfeeding women, and subsidised grain for people living below the poverty line through a public distribution system. Through its supporting schemes and programmes, the National Food Security Act (NFSA) of 2013, which makes food access a legal right, aims to assure food and nutrition security for the most vulnerable. To address the connected nutrition and livelihood challenges in India and to ensure that vulnerable groups are not left behind, the UN priority group coordinates with the government to scale up nutrition programmes and improve feeding and caring practises in the home. It aids the government's attempts to strengthen the NFSA's safety nets' efficiency and effectiveness, as well as to increase farm incomes for small and marginal farmers. The Mahatma Gandhi National Rural Employment Guarantee Act and the National Rural Livelihoods Mission are two of the organization's anti-poverty programmes that enhance agriculture and livelihoods.

Previously, the group collaborated with the Ministry of Health and Family Welfare on a nationwide consultation on wheat flour fortification and with the Food Safety and Standards Authority of India on a workshop on lobbying for a national food fortification plan. UNICEF's priority groups include the Food and Agriculture Organization (FAO), the International Development association (IFAD), the International Labour Organization (ILO), the International Organization for Migration (IOM), the United Nations Entity for Gender Equality and Women's Empowerment (UN Women), the United Nations Development Programme (UNDP), and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (WFP).

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IV. CHALLENGES FOR INDIA

1) Climate Change: As the temperature rises and rainfall becomes more irregular, farming becomes more difficult. Climate change affects not only crops, but also animals, forests, fisheries, and aquaculture, and can have major social and economic implications, including lost income, deteriorated livelihoods, trade disruptions, and bad health effects.
2) Access to remote places is limited: Indigenous peoples have suffered extreme economic backwardness as a result of living in remote, difficult terrains and practising subsistence farming.
3) Overcrowding, poverty, a lack of education, and gender inequity are all factors. Increased rural-to-urban migration and a huge informal sector have resulted in the unplanned rise of slums that lack basic health and hygiene amenities, inadequate housing, and increased food insecurity (PDS i.e. Public Distribution System).
4) Food distribution through public channels is insufficient (PDS i.e. Public Distribution System). Inadequate food distribution through public channels (PDS i.e. Public Distribution System). Deserving recipients of the subsidy are omitted since the criterion for identifying whether a household is below the poverty line (BPL) is arbitrary and varies from state to state.
5) Biofuels: The quantity of land used to cultivate food crops has reduced as the biofuel business has risen.
6) Food can be used as a weapon in battle, with opponents cutting off food sources to gain an advantage. Crops may also be damaged during a battle.
7) Unmonitored nutrition programmes: Despite the fact that the country has a variety of nutrition-related programmes, they are not properly implemented.
8) Food and nutrition policies that are inconsistent, as well as a lack of cross-ministry collaboration.
9) Corruption: Food instability is exacerbated by corruption, which includes diverting grains to the open market for a higher profit margin, selling low-quality grains at ration stores, and inconsistent shop openings.
10) Food is not always easily available in India. The task of generating more and more for a rising population is becoming increasingly difficult for a country of its size and economic progress. Agriculture output rates per unit of land and irrigation water must increase as agricultural land in India becomes limited.
11) Agriculture provides daily subsistence to over 60% of India's people. India produces over 100 million tonnes of rice each year. Food access is regarded to be more difficult in India than it is in Australia. Despite the fact that there is adequate food for India's total population, many families, especially children, do not have access to it due to financial constraints.
12) As a result, India is home to millions of undernourished youngsters. People in India consume a highly nutritious and well-balanced diet thanks to their cultural awareness. Rice is eaten at least once a day by almost the entire Indian population, allowing them to consume carbohydrates. Rice will play an important role in their daily life because India is best known for growing and exporting rice.

V. CONCLUSION

As the world's population grows, food safety and security are becoming increasingly problematic. In the twenty-first century, food safety and security will remain a global concern. While this category encompasses a wide range of essential topics, this research focuses on the principles of food safety, its impact, and government efforts.

Farmers, customers, researchers, government agencies, and consumer advocacy groups all have an impact on food safety policies and sustainable food production processes.

One Health practitioners must increase awareness among these stakeholders and provide them with information to enable them to make data-driven decisions about food and food practises, as well as develop rules and standards to ensure food safety and environmental sustainability.

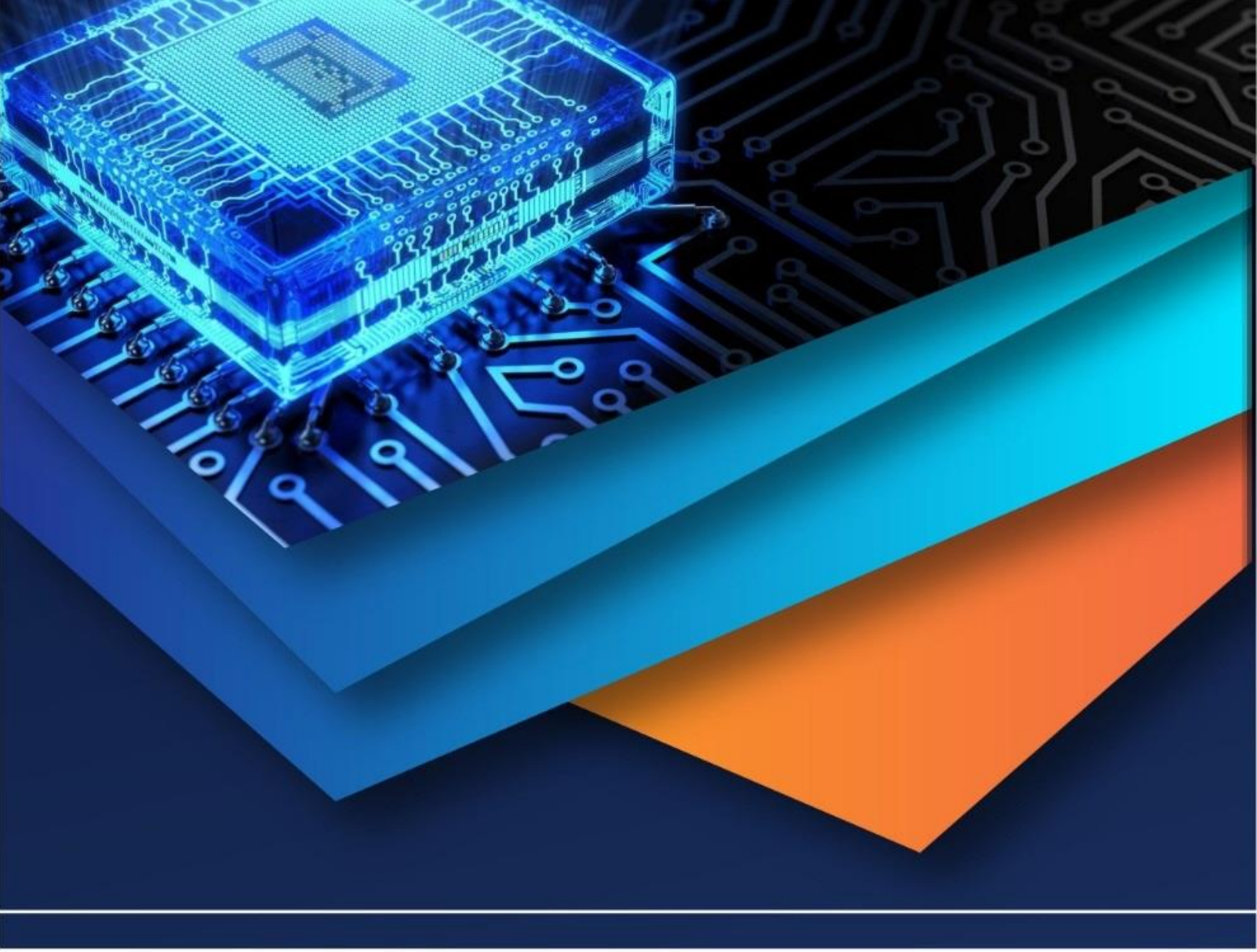
To make progress toward finding solutions to these problems, we must continue to use fundamental scientific research to inform policies, practises, and extend technical applications to boost food production, improve sustainable practises, and analyse environmental effects.

These programmes require support for creative research and collaborations in the fields of food safety, food security, and sustainable food production that contribute new information, ideas, and perspectives. Furthermore, in order for farmers to continue producing the food required to feed 9.7 billion people, research, policy, and communication operations must aid their economic well-being. Increased demand for safe foods and agricultural items around the world could help food security, nutrition, and economic well-being. Innovative farming practises and technologies are needed to ensure the availability of natural resources.

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