

SAFETY & QUALITY MANAGEMENT IN FOOD SUPPLY CHAIN

A FARM TO FORK APPROACH



editors
K P Sudheer
Bindu Lakshmanan

Safety and Quality Management in Food Supply Chain

About the Editors



Prof. K P Sudheer, obtained his B Tech Agricultural Engineering degree from Kerala Agricultural University (KAU), M Tech Agricultural Processing from Tamilnadu Agricultural University (TNAU), PhD Agricultural Engineering from IARI New Delhi and Post doctorate from KU Leuven Belgium. Prof. Sudheer started his career as scientist in Agro Processing Division, CIAE (ICAR), Bhopal. He is presently working as Associate Director of Research, Kerala Agricultural University. He is also heading the Department of Agricultural Engineering, RAFTAAR Agri Business Incubator, and Centre of Excellence in Post-harvest Technology at College of Horticulture, Thrissur, KAU.

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Foreword

Food safety and quality, the warp and weft of the global food supply chain, has assumed an incredible significance in the international and national platforms. It has been the prime demand of present day consumers. FAO has been working for more than half a century, in collaboration with national governments, the World Health Organization and other international and donor organizations, food enterprises, scientific institutions and NGOs, to improve the safety and quality of food. The expanding network of World Trade Organization along with the strict compliance of Agreement on the Application of Sanitary and Phytosanitary Measures and Agreement on Technical Barriers to Trade, has rejuvenated the trade of agricultural and food products that meet global safety and quality standards. This situation is beset with challenges posed by food-borne hazards, emergence of serious trans boundary food scares and increased consumer awareness. Augmenting capacity building in food safety and quality has been recognised worldwide, as a strategic policy to improve public health and/or promote economic development. To fulfil its commitment to the consumer, the food industry is expected to follow stringent and non compromising guidelines to assure food safety and quality, right from procurement of resources to the end product.

The inferior quality standards in production and postproduction supply chain management has contributed to India's reduced global share in the market, despite huge production. Reinforcing the academia, industry and entrepreneurs with solid concepts of safety and quality is vital to reaffirm a country's position in the new regime of a global village. The book etching the fundamental aspects of food safety like GMP, GAP, PRP, HACCP, FSMS etc linked with different food commodities is sure to provide refined inputs to stakeholders. Besides, the book encompasses the safety and quality of processing methodologies of an exceptional range of products right from traditional and street foods to novel food products.

The authors have marked their signature of professional excellence in all the chapters which is sure to benefit the stakeholders. A comprehensive sketch of food safety and quality of several commodities, this book, is a unique and creative venture to cater to academia demands, diverse food industry requirements, food exporters and entrepreneurs.

New Delhi

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Preface

Food safety and quality have a profound role in the global food supply chain. The food safety and agricultural health standards in industrialized countries are quite stringent which pose major challenges for developing countries to succeed in international markets for high-value food products, such as fruit, vegetables, fish, meat, milk and grains. Undoubtedly, such standards have played a catalytic role providing incentives for modernization of export supply and regulatory systems as well as the adoption of safer and more sustainable production and processing practices. In this context, there is a burgeoning demand for updated research and development to identify and control food safety hazards, and to deal specifically with analysis of food quality and safety. The laboratories need to be strengthened in terms of infrastructure facilities, manpower, and systems to detect hazards in food supply chain.

In this backdrop, it is essential that the concepts of food safety and quality in food supply chain be made available in an easy to read format for the benefit of the students, analysts and researchers. The content of the book is useful both for those looking to begin food science careers and to established specialists. Besides the special emphasis on pre requisite programmes, risk analysis, GMP, food safety management systems, and international trading issues, the chapters on safety attributes of street foods and traditional foods have been designed to fill up the void in integrated strategy development protocols. Due importance has also been given to elaborate the various safety aspects of packaging as well as novel food processing technologies. The authors have put in their strenuous effort, proven experience and expertise to blend science and literature so that it can easily be understood by an undergraduate student, is acceptable to post graduates and serves as a bench mark for researchers. The authors of each chapter have presented the quality and safety aspects of each commodity in a subtle manner along with the existing regulations, wherever applicable.

Words fail to register our heartfelt appreciation and gratitude to all the contributors of this book who have put-in a lot of scholarly and sincere efforts in bringing out a state-of-art technology. With deep sense of pride and dignity, authors express heartfelt sense of gratitude and regards to Dr. K. Alagusundaram, Deputy Director General (Engg), ICAR, New Delhi, Prof.(Dr.) R. Chandrababu, Vice-Chancellor, Kerala Agricultural University, and Prof.(Dr.) M.R. Saseendranath,

Vice-Chancellor, Kerala Veterinary and Animal Sciences University, with whose guidance we have been able to publish this manuscript.

The purpose of writing this book would be achieved if it could present the essence of food safety and quality in the right perspective to the concerned stake holders. There is no limit to perfection, hence constructive criticism is welcome for its improvement in future.

K P Sudheer
Bindu Lakshmanan

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