Foreword

At this point of human existence in the twenty-first century, there is an ever-present global food crisis. The Global Report on Food Crises produced by the Food Security Information Network and published by the Food and Agriculture Organization of the United Nations in April 2019 does not make for encouraging reading. According to the report, over 113 million people across 53 countries experienced acute hunger in 2018. The report singles out 8 countries, and 5 of them from Africa that accounted for two-thirds of the total number of people facing acute food insecurity, which amounted to about 72 million people.

Clearly, there is a global food crisis which is palpably exhibited in the form of acute food insecurity with Africa (especially sub-Saharan Africa) being the hardest hit. The United Nations has forecast that given the current trajectory, Africa is not on track to realize the Sustainable Development Goal 2 of Zero Hunger by 2030. The statistics for Africa in this respect are dire. About 20% of the African population is undernourished, with sub-Saharan Africa being the worst hit by food insecurity. About a third of undernourished people in the world today are in Africa and of these, 90% are in sub-Saharan Africa. The main drivers of food insecurity are identified as conflict and insecurity, climate shocks, and economic turbulence.

Food security is not just about access to food. It is also about how nutritious the food is. Micronutrient and macronutrient malnutrition are a well-known scourge in the developing world. However, many parts of the developing world such as sub-Saharan Africa are recording significant increases in occurrence of diet-related noncommunicable diseases. Rapid urbanization, rising incomes, and poor dietary choices due to a demand for convenience have brought on a nutrition transition and change in dietary patterns from nutrient-dense to more energy-dense foods. This has resulted in overnutrition accompanied with susceptibility to conditions such as obesity and noncommunicable diseases.

The gloomy picture presented above puts in sharp focus the pivotal role that food science and technology can play in combating the global food crisis and contributing to attaining food security. It underscores the need to train more food scientists and technologists, and, in that regard, the importance of this book on *Food Science and Technology: Fundamentals and Innovation* cannot be over emphasized.

This book begins with a look at the food industry as a whole and goes on to discuss aspects of postharvest handling and food processing. The processing of the major plant and animal food groups, namely cereals and legumes, meat, poultry, and fish are discussed. The book then goes on to deal with a broad range of issues within the three major pillars of food science and technology – food microbiology, food chemistry, and product development. To round off, the book includes important chapters that discuss recent innovations in food processing and in the food industry, and this is followed by a couple of offerings dealing with food business, entrepreneurship, management, and regulation.

https://doi.org/10.1515/9783111013107-202

This is a much-needed book in light of the prevailing global food crisis and challenges with food insecurity. It will be useful for a wide range of people including academics, researchers, and students in food science and technology, food industry professionals, food entrepreneurs, farmers, policymakers, and the curious consumer. It is envisaged that this book will have significant impact in the field of food science and technology.

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