Abstracts

Microorganisms play a pivotal role in the food industry, influencing safety, quality, and overall economic dynamics. This chapter explored the economic ramifications of microorganisms in food, emphasizing their significance and identifying key microorganisms of interest. A detailed examination of how microorganisms contribute to food spoilage unveils the economic implications associated with compromised food quality. Understanding these mechanisms is crucial for addressing economic challenges linked to deteriorating food products. The investigation delved into the role of microorganisms in foodborne illnesses, emphasizing their impact on public health and the subsequent economic consequences for the food industry. Strategies for enhancing food safety are explored, considering their economic feasibility. The chapter dissected the complexities of utilizing microorganisms for food processing, shedding light on economic considerations that influence decision-making. An analysis of economic losses resulting from microbial contamination underscores the need for effective mitigation strategies. This chapter evaluated the economic feasibility of these strategies and their potential to safeguard the economic interests of the food industry. This chapter critically assessed the role of technology in mitigating economic losses and enhancing the overall industry resilience. Comparative analysis across different regions elucidated the diverse economic consequences of microorganisms in food. International regulations and their impact on economic dynamics provide a comprehensive understanding of the global landscape. This chapter highlights the areas for future research and potential economic shifts in response to evolving microbial challenges. This chapter concludes by summarizing key findings and emphasizing the overarching economic implications of microorganisms in the food sector.