This book focuses on state of the art technologies to produce microbiologically safe foods for our global dinner table. Each chapter summarizes the most recent scientific advances, particularly with respect to food processing, pre- and post-harvest food safety, quality control, and regulatory information.

The book begins with a general discussion of microbial hazards and their public health ramifications. It then moves on to survey the production processes of different food types, including dairy, eggs, beef, poultry, and fruits and vegetables, pinpointing potential sources of human foodborne diseases. The authors address the growing market in processed foods as well novel interventions such as innovative food packaging and technologies to reduce spoilage organisms and prolong shelf life. Each chapter also describes the normal flora of raw product, spoilage issues, pathogens of concern, sources of contamination, factors that influence survival and growth of pathogens and spoilage organisms, indicator microorganisms, approaches to maintaining product quality and reducing harmful microbial populations, microbial standards for end-product testing, conventional microbiological and molecular methods, and regulatory issues.

Other important topics include the safety of genetically modified organisms (GMOs), predictive microbiology, emerging foodborne pathogens, good agricultural and manufacturing processes, avian influenza, and bioterrorism.
ABOUT THE AUTHOR

Norma Heredia, ScD, is Professor of Food Safety at the University of Nuevo Leon in Mexico. Her research focus is the epidemiology and control of microorganisms in foods. She serves the industry and government as a consultant and in laboratory analysis of food microbiology. She has served on the editorial boards and as an ad hoc reviewer for several journals.

Irene Wesley, DPH, is a microbiologist at the National Animal Disease Center, part of the USDA's Agricultural Research Service, in Ames, Iowa. Her research focus is the on-farm detection of microbial foodborne pathogens in livestock and poultry. She is a member of the American Academy of Microbiology and has served on national food safety committees and editorial boards.

Santos Garcia, ScD, is Professor and Consultant of Food Safety at the University of Nuevo Leon in Mexico. His research focus is the physiology and control of microbial food-borne pathogens. He has served on international food safety committees and editorial boards for several journals. He is a coeditor of Guide to Foodborne Pathogens (Wiley).

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