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Nota di contenuto	Decontamination of Fresh and Minimally Processed Produce; Contents; Preface; List of Contributors; SECTION I PRODUCE CONTAMINATION; 1 Microbial ecology; 1.1 Introduction; 1.2 Sources of preharvest contamination; 1.3 Fate of pathogen contamination in plant production systems; 1.3.1 Experimental studies - field studies versus growth chamber studies; 1.3.2 Rhizosphere and bulk soil systems; 1.3.3 Phyllosphere; 1.4 Molecular and biochemical responses of enteric pathogens and plant hosts; 1.4.1 Mechanisms employed by enteric pathogens to survive as plant endophytes or epiphytes 1.4.2 Mechanisms employed by plant hosts to resist invasion by enteric pathogens 1.5 Cross-contamination of enteric pathogens to produce during harvest; 1.6 Concluding comments; References; 2 Surface

characteristics of fresh produce and their impact on attachment and removal of human pathogens on produce surfaces; 2.1 Introduction; 2.2 Produce surface characteristics; 2.2.1 Surface topography; 2.2.2 Surface hydrophobicity; 2.3 Means to determine produce surface characteristics; 2.3.1 Determination of surface roughness; 2.3.2 Surface roughness determination with CLSM; 2.3.3 Determination of hydrophobicity; 2.4 Effect of surface characteristics on attachment and removal of human pathogens; 2.4.1 Effect of surface roughness; 2.4.2 Effect of hydrophobicity; 2.4.3 Effect of hydrodynamics; References; 3 Biofilms; 3.1 Introduction; 3.2 Biofilm formation; 3.3 Presence of biofilms on the produce surface; 3.4 Antimicrobial resistance of biofilms versus planktonic cells; 3.5 Perspective; References; 4 Resistance and sublethal damage; 4.1 Introduction; 4.2 Basic concepts; 4.2.1 Definitions; 4.2.2 Chemical interventions used in the produce industry; 4.2.3 Physical interventions used in the produce industry; 4.2.4 Mode of action of biocides, food antimicrobials, and physical treatments; 4.3 Stress and resistance to biocides and antimicrobial physical treatments; 4.4 Implications of stress, resistance, and sublethal damage in fresh produce decontamination; References; SECTION II DECONTAMINANTS; 5 Produce washers; 5.1 Basic concepts; 5.2 Types of washers; 5.2.1 Immersion washers; 5.2.2 Non-immersion washers; 5.3 Factors influencing the efficacy of washing; 5.3.1 Time of contamination; 5.3.2 Sanitation practices; 5.3.3 Water quality; 5.3.4 Surfactants and antimicrobials; 5.3.5 Pathogen internalization; 5.4 Conclusion; Acknowledgment; References; 6 Minimal processing; 6.1 Introduction; 6.2 Effect of minimal processing on pathogenic bacteria; 6.3 Effect of minimal processing on spoilage bacteria; 6.4 Effect of minimal processing on vegetable physiology; 6.5 Effect of minimal processing on quality and shelf life; 6.6 Effect of minimal processing on nutritional and phytochemical composition; 6.7 Conclusion; References; 7 Chlorine; 7.1 Definition; 7.2 Inactivation mechanism; 7.3 Effect of chlorine on pathogenic microorganisms; 7.4 Effect of chlorine on spoilage microorganisms and shelf life

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## Sommario/riassunto

Attempts to provide safer and higher quality fresh and minimally processed produce have given rise to a wide variety of decontamination methods, each of which have been extensively researched in recent years. Decontamination of Fresh and Minimally Processed Produce is the first book to provide a systematic view of the different types of decontaminants for fresh and minimally processed produce. By describing the different effects - microbiological, sensory, nutritional and toxicological - of decontamination treatments, a team of internationally respected authors reveals not only

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