1. Record Nr. UNISA996201669203316

Titolo	Decontamination of fresh and minimally processed produce [[electronic resource] /] / edited by Vicente M. Gomez-Lopez
Pubbl/distr/stampa	Chichester, West Sussex, UK ; ; Ames, Iowa, : Blackwell Pub., 2012
ISBN	1-118-22931-2 1-280-58644-3 9786613616272 1-118-22918-5 1-118-22930-4
Descrizione fisica	1 online resource (577 p.)
Altri autori (Persone)	Gomez-LopezVicente M
Disciplina	363.19/26
Soggetti	Food industry and trade - Sanitation Food industry and trade - Production control Food - Safety measures
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
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 impacton 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

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