

1. Record Nr.	UNINA9910809597503321
Autore	Kutz Myer
Titolo	Handbook of farm, dairy and food machinery engineering // edited by Myer Kutz, Myer Kutz Associates, Inc., Delmar, New York
Pubbl/distr/stampa	London, : Academic Press, 2013 London : , : Academic Press, , 2013
ISBN	1-78402-377-9 0-12-385882-8
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (xxiii, 735 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	631.3
Soggetti	Food processing machinery Farm equipment Dairying - Equipment and supplies
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	Front Cover; Handbook of Farm, Dairy and Food Machinery Engineering; Copyright Page; Dedication; Contents; Preface to the Second Edition; Preface to the First Edition; List of Contributors; 1 The Food Engineer; 1. Nature of Work and Necessary Skills; 2. Academic and Industry Preparation; 3. Work Opportunities for a Food Engineer; 3.1 Job Description Sample 1; 3.2 Job Description Sample 2; 3.2.1 Essential Functions; 3.3 Job Description Sample 3; 3.4 Job Description Sample 4; 3.4.1 Food Engineering Research; 3.4.2 Requirements; 3.5 Job Description Sample 5; 4. Engineering Jobs 5. Future Opportunities 6. Conclusions; Reference; Further reading; 2 Food Regulations; 1. Background; 2. Federal Register; 3. Code of Federal Regulations; 4. United States Code; 5. State and Local Regulations; 6. USDA-FSIS Sanitation Programs; 6.1 Sanitation; 6.1.1 Sanitation Performance Standards; 6.1.2 Sanitation Standard Operating Procedures (SSOPs); 7. FDA Sanitation Programs; 8. Food Safety Modernization Act; 8.1 Prevention; 8.2 Inspection and Compliance; 8.3 Response; 8.4 Imports; 9. Hazard Analyses and Critical Control Point Program (HACCP); 9.1 Prerequisite Programs 10. Meat Processing 11. Shell Eggs; 11.1 Egg Products; 12. Seafood

Processing; 13. Fruits, Vegetables, and Nuts; 14. Beverages; 14.1 Alcoholic Beverages; 14.2 Carbonated Beverages; 14.3 Bottled Water; 14.4 Fruit and Vegetable Juices; 14.5 Milk and Milk Products; 14.6 Pasteurization; 15. Canned Foods; 16. Food Service/Restaurants; 17. Export Foods; 18. Imported Foods; 19. Conclusions; 20. Acronyms; References; 3 Food Safety Engineering; 1. Introduction; 2. Intervention Technologies; 2.1 Novel Non-Thermal Intervention Technologies; 2.1.1 High-Pressure Processing 2.1.2 Pulsed Electric Field Processing 2.1.3 Irradiation; 2.1.4 Ultraviolet Disinfection; 2.2 Chemical Interventions; 2.2.1 Ozone; 2.2.2 Other Chemical Interventions; 2.3 Hurdle Approach; 3. Control/Monitoring/Identification Techniques; 3.1 Chromogenic Microbiological Media; 3.2 Molecular and Immunological Assays Methods; 3.2.1 DNA Probe Methods; 3.2.2 Polymerase Chain Reaction Assays; 3.2.3 ELISA; 3.3 Biosensors; 3.4 Fourier Transform Infrared Spectrometry; 4. Packaging Applications in Food Safety; 4.1 Active Packaging; 4.2 Intelligent or "Smart" Packaging; 4.3 Tamper Evident Packaging 5. Tracking and Traceability 6. Byproducts of Processing; 6.1 Acrylamide; 6.2 3-MCPD; 7. Conclusions; Acknowledgment; References; 4 Farm Machinery Automation for Tillage, Planting Cultivation, and Harvesting; 1. Introduction; 2. Vehicle Guidance; 2.1 Guidance Strategies; 2.1.1 Manual Vehicle Guidance; 2.1.2 Operator-Assisted Vehicle Guidance; 2.1.3 Semi-Autonomous Vehicle Guidance; 2.1.4 Fully Autonomous Vehicle Guidance; 3. Implement Guidance Systems; 4. Guidance Methods; 4.1 GPS; 4.2 Machine Vision; 4.3 Dead Reckoning; 4.4 Inertial; 4.5 Crop Feelers; 4.6 Furrow Following 5. Challenges Facing Autonomous Vehicles

Sommario/riassunto

Handbook of Farm, Dairy and Food Machinery Engineering is the essential reference for engineers who need to understand those aspects of the food industry from farm machinery to food storage facilities to the machinery that processes and packages our foods. The process of getting food from "farm to fork," as the saying goes, involves more than planting, harvesting, shipping, processing, packaging and distributing-though those are all key components. Effective and efficient food delivery systems are built around processes that maximize the effort while minimizing cost, time,
