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Nota di contenuto	Front Cover; Food Industry Wastes; Copyright Page; Dedication; Contents; Contributors; Preface; Introduction: Causes and Challenges of Food Wastage; 1 Sustainability of the Food Supply Chain; 2 Quantity of Food Wastes; 3 Water Waste; 4 Environmental Effect of Food Waste; 5 Conclusions; References; Abbreviations and Glossary; I: Food Industry Wastes: Problems and Opportunities; 1 Recent European Legislation on Management of Wastes in the Food Industry; 1 Introduction; 1.1 Definitions of Food Industry Waste (FIW); 1.2 Waste Streams Considered in This Book; 2 Various Legal Aspects of Food Waste 2.1 Selecting Best Available Technique Candidates for the Food and Drink Sector 3 Effectiveness of Waste Management Policies in the European Union; 3.1 Adoption of a "Recycling Society" in the EU; 3.2 Main Stipulations of the Landfill Directive 1999/31/EC; 3.2.1 The European Environment Agency Report No 7/2009; 3.2.1.1 Aims; 3.2.1.2 Indicator-Based Analysis; 3.2.1.3 Interviews with Key Stakeholders; 3.2.1.4 Policy Instruments; German Case Study; Hungarian Case Study; 3.2.1.5 Landfill Taxes and Gate Fees; 3.2.1.6 Public Acceptance; 3.3 European Waste Framework Directive (WFD) 4 Biowaste Management Policy Updates 4.1 Landfill Bans on Food Waste;

4.1.1 Introduction of New Regulations and the Right Policies; 4.2 Selection of Measures; 4.3 Example of Application of Waste Management Legislation in Ireland; 4.4 Waste Management for the Food Industries in the USA and Canada; 5 Policy Recommendations Identified for Their Prevention Potential; 6 Environmental Management Standards and Their Application in the Food Industry; 7 Conclusions; References; 2 Development of Green Production Strategies; 1 Introduction; 2 Engineering Design Principles for Industrial Ecology
2.1 History and Definitions of Industrial Ecology
2.2 Complex Adaptive Self-Organizing Hierarchical Open (SOHO) System; 2.2.1 Ecosystems as Self-Organizing Systems; 2.3 Sustainable Livelihood (SL); 2.4 Ecological Integrity; 2.4.1 A Conceptual Model of Industrial Ecology; 2.5 Design Principles and Tools for Industrial Ecology; 2.5.1 Interfacing; 2.5.1.1 Focus on Suboptimization and Example with a Student Residence Cafeteria; 2.5.2 Mimicry of Natural Ecosystems; 2.5.3 Using Appropriate Biotechnology; 2.5.4 Renewable Resources; 3 Barriers to Adoption of Industrial Ecology and Drivers of Change
3.1 Constraints and Incentives for Industrial Ecology
3.2 Eco-Innovation as a Driver of Sustainable Manufacturing; 3.3 Drivers of and Barriers to Eco-Innovation; 4 Educating Industrial Ecologists; 5 Green Production; 5.1 Principles of Green Production; 5.2 Green Production Criteria; Changing the Production Process; Changing the Product; 6 Sustainability in the Global Food and Drink Industry; 7 Holistic Approach in Food Production; 7.1 Development of Green Production Strategy; 7.2 The Upgrading Concept; 8 The Green Biorefinery Concept; 9 Anaerobic Digestion and Biogas Production Technology
10 Energy Generated by Food and Farm Co-Digestion

Sommario/riassunto

Food Industry Wastes: Assessment and Recuperation of Commodities presents emerging techniques and opportunities for the treatment of food wastes, the reduction of water footprint, and creating sustainable food systems. Written by a team of experts from around the world, this book provides a guide for implementing bioprocessing techniques. It also helps researchers develop new options for the recuperation of these wastes for community benefit. More than 34 million tons of food waste was generated in the United States in 2009, at a cost of approximately 43 billion. And while le
