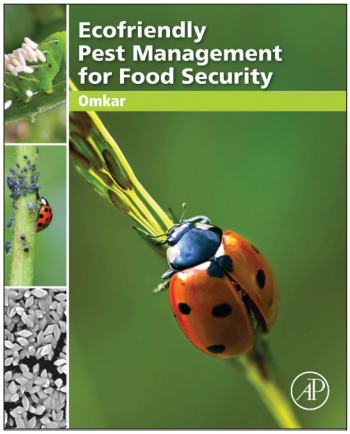
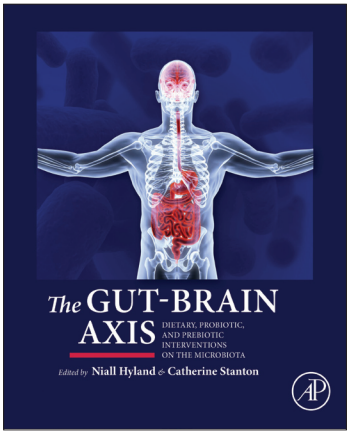
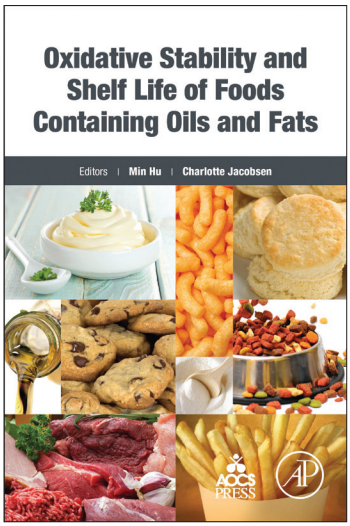
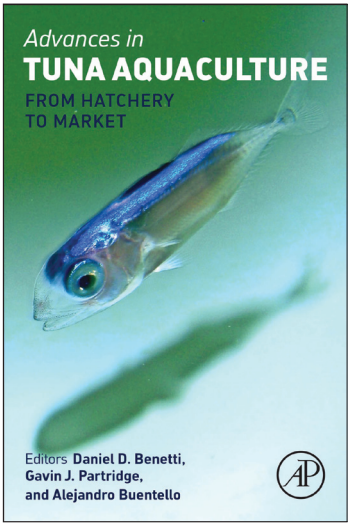
ELSEVIER

FOOD SCIENCE & NUTRITION









2016 CATALOG

Empowering Knowledge™

Elsevier Science and Technology Books deliver targeted content that enables the understanding and application of research. Year after year readers use our books to drive advancements in their fields.

Tools and content on ScienceDirect offer:

- **Full-text version online or download and print** with no digital rights management restrictions (DRM)
- **Multi-user/concurrent access** at any time from any location to expand the reach of the content to your patrons
- **Portable** content available on computers, tablets and smartphones to give users information in the format that best suits their needs
- **Integrated book and journal content** for easier access to related materials
- **Free MARC records** to drive discoverability and usage

Our foundational content—including **Reference Modules**, unique resources that are **trustworthy**, **current**, **discoverable**, and **hosted on ScienceDirect**—complements original research in journal articles.

Our **Legacy Collection** on ScienceDirect, in 20 subject areas, ensures that **valuable historical content** is **discoverable and searchable**, saving time and resources.

Table of Contents

Stay Connected

Stay connected with Elsevier on Facebook, Twitter, YouTube and LinkedIn. These sites are full of news, resources, offers and discussions. Communicate with us and other librarians,researchers, and professionals in your field.View all at store.elsevier.com/stayconnected

Pricing

Publication dates, prices, and other details subject to change without notice.

Advances in Agronomy, Vol 138

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences as compiled by an eclectic group of leading scientists from the world of agronomy

ISBN: 978-0-12-804774-3

PUB DATE: June 2016

FORMAT: Hardback

PAGES: c. 300

AUDIENCE

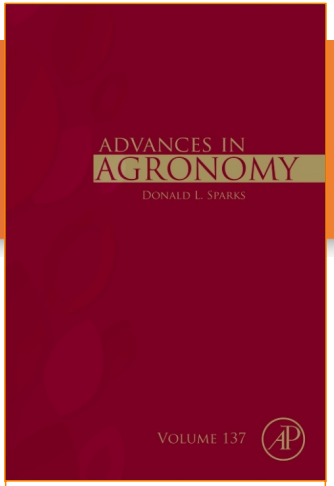
scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.

KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in crop and soil sciences

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich, varied, and exemplary of the abundant subject matter addressed by this long-running serial.



Advances in Agronomy, Vol 137

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences as compiled by an eclectic group of leading scientists from the world of agronomy

KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in crop and soil sciences

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich, varied, and exemplary of the abundant subject matter addressed by this long-running serial.

ISBN: 978-0-12-804692-0

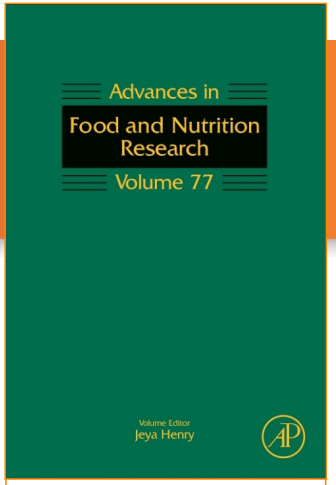
PUB DATE: May 2016

FORMAT: Hardback

PAGES: c. 300

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Food and Nutrition Research, Vol 77

Advances in Food and Nutrition Research

Edited by: ***Jeya Henry*** Singapore Institute for Clinical Sciences, Brenner Center for Molecular Medicine, Singapore

ISBN: 978-0-12-804772-9

PUB DATE: March 2016

FORMAT: Hardback

PAGES: c. 222

AUDIENCE

Food scientists in academia and industry and professional nutritionists and dietitians.

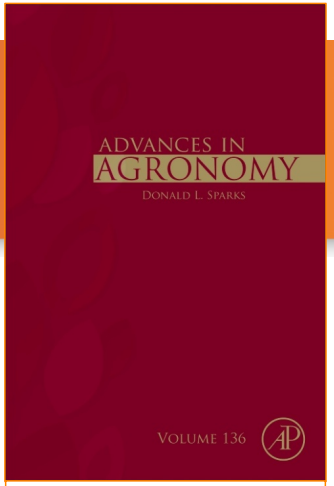
This book presents the latest in an ongoing series that continually publishes cutting-edge reviews in the areas of food science and nutrition, helping users recognize the integral relationship between the food and nutritional sciences, and bringing together outstanding and comprehensive reviews that highlight this relationship

KEY FEATURES

- Provides the latest, most important information for food scientists and nutritionists
- Contains peer-reviewed articles by a panel of respected scientists
- Recognized as the go-to series on the topic of advances in food and nutrition research since 1948

DESCRIPTION

Advances in Food and Nutrition Research recognizes the integral relationship between the food and nutritional sciences, bringing together outstanding and comprehensive reviews that highlight this relationship. The book contains contributions that detail scientific developments in the broad areas of food science and nutrition, providing those in academia and industry with the latest information on emerging research in these constantly evolving sciences.



Advances in Agronomy, Vol 136

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting edge reviews on topics in the crop and soil sciences

KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in crop and soil sciences

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich and varied and exemplary of the abundant subject matter addressed by this long-running serial.

ISBN: 978-0-12-804681-4

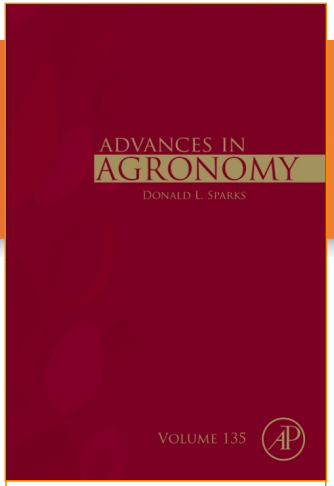
PUB DATE: February 2016

FORMAT: Hardback

PAGES: c. 255

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Agronomy, Vol 135

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting edge reviews on topics in the crop and soil sciences

KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in crop and soil sciences

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich and varied and exemplary of the abundant subject matter addressed by this long-running serial.

ISBN: 978-0-12-804693-7

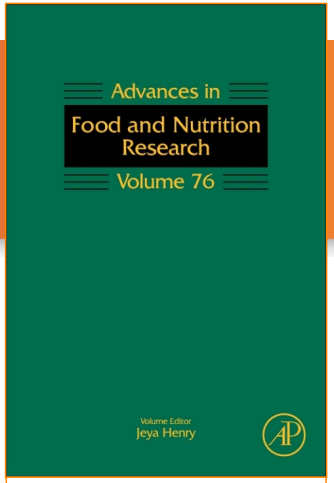
PUB DATE: January 2016

FORMAT: Hardback

PAGES: c. 234

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Food and Nutrition Research, Vol 76

Advances in Food and Nutrition Research

Edited by: ***Jeya Henry*** Singapore Institute for Clinical Sciences, Brenner Center for Molecular Medicine, Singapore

ISBN: 978-0-12-803606-8

PUB DATE: October 2015

FORMAT: Hardback

PAGES: c. 164

AUDIENCE

Food scientists in academia and industry and professional nutritionists and dietitians.

This book presents the latest in an ongoing series that continually publishes cutting-edge reviews in the areas of food science and nutrition, helping users recognize the integral relationship between the food and nutritional sciences, and bringing together outstanding and comprehensive reviews that highlight this relationship

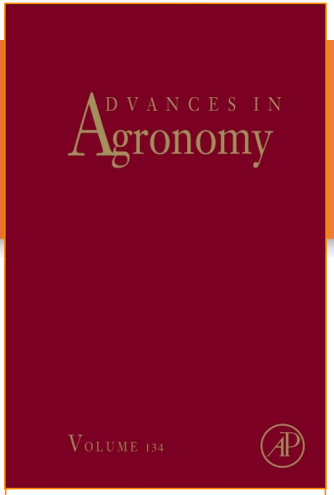
KEY FEATURES

- Provides the latest, important information for food scientists and nutritionists
- Contains peer-reviewed articles by a panel of respected scientists
- The go-to series on the topic of advances in food and nutrition research since 1948

DESCRIPTION

Advances in Food and Nutrition Research recognizes the integral relationship between the food and nutritional sciences, bringing together outstanding and comprehensive reviews that highlight this relationship.

The book contains contributions that detail scientific developments in the broad areas of food science and nutrition, providing those in academia and industry with the latest information on emerging research in these constantly evolving sciences.



Advances in Agronomy, Vol 134

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting edge reviews on topics in the crop and soil sciences.

KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in crop and soil sciences

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. As always, the subjects covered are rich and varied and exemplary of the abundant subject matter addressed by this long-running serial.

ISBN: 978-0-12-803323-4

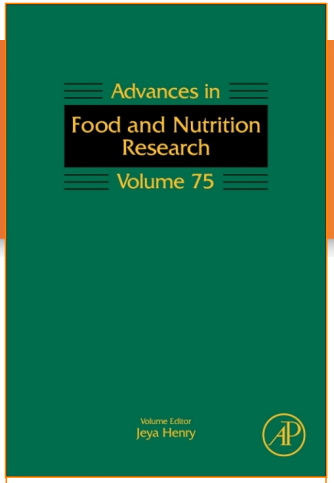
PUB DATE: September 2015

FORMAT: Hardback

PAGES: c. 252

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Food and Nutrition Research, Vol 75

Advances in Food and Nutrition Research

Edited by: ***Jeya Henry*** Singapore Institute for Clinical Sciences, Brenner Center for Molecular Medicine, Singapore

Presents the latest in an ongoing series that continually publishes cutting-edge reviews in the areas of food science and nutrition

KEY FEATURES

- Provides the latest important information for food scientists and nutritionists
- Contains peer-reviewed articles by a panel of respected scientists
- Ideal for those studying and researching topics, including glutamate, umami, capsaicin, gotukola, vitamin D, and chia seeds, amongst others
- The go-to series on the topic of advances in food and nutrition research since 1948

DESCRIPTION

Advances in Food and Nutrition Research recognizes the integral relationship between the food and nutritional sciences, bringing together outstanding and comprehensive reviews that highlight this relationship.

The book contains contributions that detail scientific developments in the broad areas of food science and nutrition, providing those in academia and industry with the latest information on emerging research in these constantly evolving sciences.

ISBN: 978-0-12-802227-6

PUB DATE: August 2015

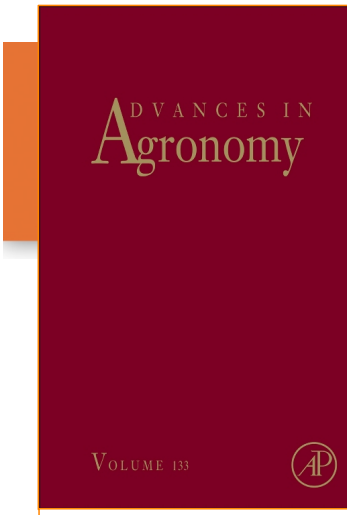
FORMAT: Hardback

PAGES: c. 160

AUDIENCE

Food scientists in academia and industry and professional nutritionists and dietitians.

ENGINEERING
COMMUNICATIONS
Please contact your Elsevier Sales or Customer Service Representative



Advances in Agronomy, Vol 133

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences

KEY FEATURES

- Timely and state-of-the-art reviews
- Distinguished, well recognized authors
- A venerable and iconic review series
- Timely publication of submitted reviews

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world.

As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial.

ISBN: 978-0-12-803052-3

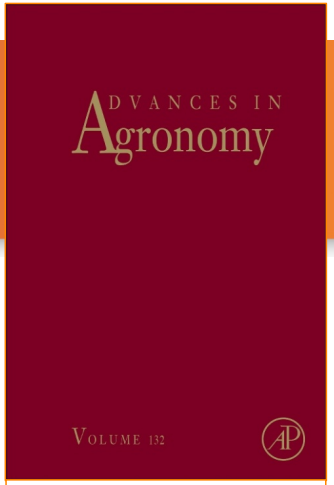
PUB DATE: August 2015

FORMAT: Hardback

PAGES: c. 248

AUDIENCE

scientists and practitioners in academia, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Agronomy, Vol 132

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences

KEY FEATURES

- Timely and state-of-the-art reviews
- Distinguished, well recognized authors
- A venerable and iconic review series
- Timely publication of submitted reviews

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world.

As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial.

ISBN: 978-0-12-802135-4

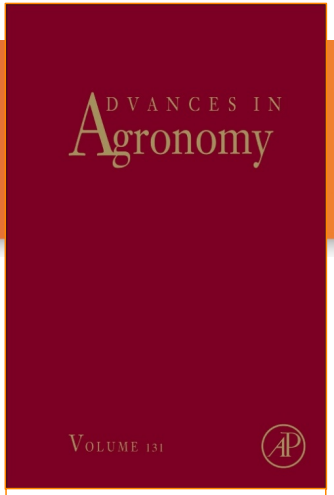
PUB DATE: May 2015

FORMAT: Hardback

PAGES: c. 210

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Agronomy, Vol 131

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews of topics in the crop and soil sciences

KEY FEATURES

- Timely and state-of-the-art reviews
- Distinguished, well recognized authors
- A venerable and iconic review series
- Timely publication of submitted reviews

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. Five volumes are published yearly which ensures that authors' contributions are disseminated to the readership in a timely manner.

As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial.

ISBN: 978-0-12-802136-1

PUB DATE: April 2015

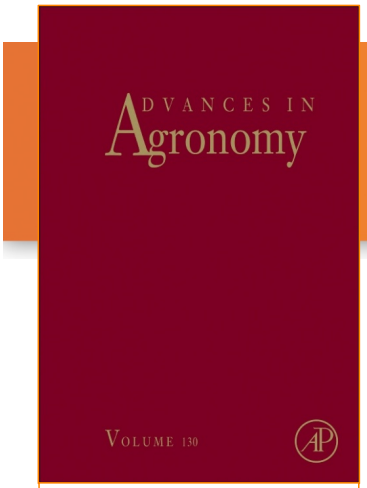
FORMAT: Hardback

PAGES: c. 344

AUDIENCE

scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences

ENGINEERING
COMMUNICATIONS
Please contact your Elsevier Sales or Customer Service Representative



Advances in Agronomy, Vol 130

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

Advances in Agronomy is a highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences.

KEY FEATURES

- Timely and state-of-the-art reviews
- Distinguished, well recognized authors
- A venerable and iconic review series
- Timely publication of submitted reviews

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. Each volume contains an eclectic group of reviews by leading scientists throughout the world. Five volumes are published yearly which ensures that authors' contributions are disseminated to the readership in a timely manner.

As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial.

ISBN: 978-0-12-802137-8

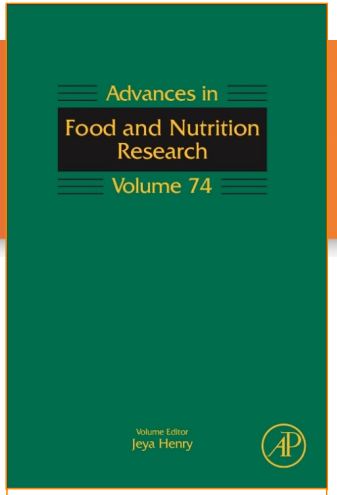
PUB DATE: January 2015

FORMAT: Hardback

PAGES: c. 430

AUDIENCE

Scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences. The readership spans the globe.



Advances in Food and Nutrition Research, Vol 74

Advances in Food and Nutrition Research

Edited by: ***Jeya Henry*** Singapore Institute for Clinical Sciences, Brenner Center for Molecular Medicine, Singapore

This series continually publishes cutting-edge reviews in the areas of food science and nutrition

KEY FEATURES

- The latest important information for food scientists and nutritionists
- Peer-reviewed articles by a panel of respected scientists
- The go-to series since 1948

DESCRIPTION

Advances in Food and Nutrition Research recognizes the integral relationship between the food and nutritional sciences and brings together outstanding and comprehensive reviews that highlight this relationship. Contributions detail scientific developments in the broad areas of food science and nutrition and are intended to provide those in academia and industry with the latest information on emerging research in these constantly evolving sciences.

ISBN: 978-0-12-802226-9

PUB DATE: January 2015

FORMAT: Hardback

PAGES: c. 136

AUDIENCE

Food scientists in academia and industry and professional nutritionists and dietitians.

Advances in Agronomy, Vol 129

Advances in Agronomy

Edited by: ***Donald L Sparks*** S.Hallock du Pont Chair in Soil and Environmental Chemistry and Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

A highly cited and well established serial review that includes cutting-edge reviews on topics in the crop and soil sciences, by leading scientists throughout the world.

KEY FEATURES

- Timely and state-of-the-art reviews
- Distinguished, well recognized authors
- A venerable and iconic review series
- Timely publication of submitted reviews

DESCRIPTION

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial.

Six volumes are published yearly which ensures that authors' contributions are disseminated to the readership in a timely manner.

ISBN: 978-0-12-802138-5

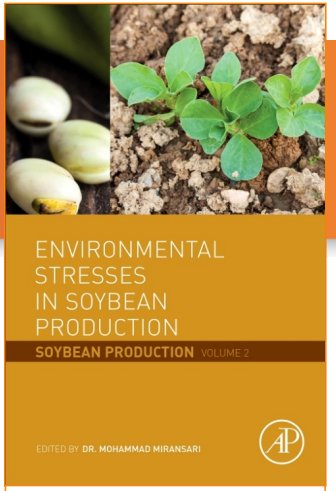
PUB DATE: January 2015

FORMAT: Hardback

PAGES: c. 334

AUDIENCE

Scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences



Environmental Stresses in Soybean Production

Soybean Production Volume 2

Edited by: ***Mohammad Miransar*** AbtinBerkeh Ltd. Co., Tehran, Iran

A thorough examination of the impact of environmental stress on soybean crop yield, this insightful guide identifies core issues and methods to address worldwide concerns about how to ensure sustainable crop production in light of climate and soil quality changes

KEY FEATURES

- Presents insights for addressing specific environmental stress conditions in soybean production, including soil, atmospheric, and other contributing factors
- Facilitates translational methods based on stress factors from around the world
- Examines the future of soybean production challenges, including those posed by climate change
- Complements volume one, *Abiotic and Biotic Stresses in Soybean Production*, providing further insights into crop protection

DESCRIPTION

Environmental Stress Conditions in Soybean Production: Soybean Production, Volume Two, examines the impact of conditions on final crop yield and identifies core issues and methods to address concerns. As climate and soil quality changes and issues continue to manifest around the world, methods of ensuring sustainable crop production is imperative. The care and treatment of the soil nutrients, how water availability and temperature interact with both soil and plant, and what new means of crop protection are being developed make this an important resource for those focusing on this versatile crop. The book is a complement to volume one, *Abiotic and Biotic Stresses in Soybean Production*, providing further insights into crop protection.

ISBN: 978-0-12-801535-3

PUB DATE: June 2016

FORMAT: Hardback

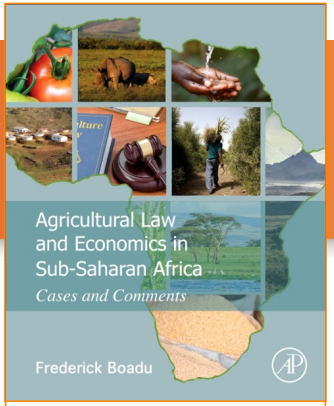
PAGES: c. 320

AUDIENCE

Researchers, academicians and scientists in plant biology, plant physiology, plant molecular biology, crop production, plant-microbe interactions, microbiology, biotechnology, environment, etc. It is also of special significance to the industry sector, as the production and processing of soybean grains for food and oil production is an important process. Advanced level students in these areas.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Agricultural Law and Economics in Sub-Saharan Africa

Cases and Comments

Frederick Owusu Boadu Department of Agricultural Economics, Texas A&M University, College Station, TX, USA

ISBN: 978-0-12-801771-5

PUB DATE: June 2016

FORMAT: Hardback

PAGES: c. 608

AUDIENCE

Professionals, students and researchers in traditional economics, Agricultural economics, law school, interdisciplinary social science courses, or at an international organization research center. Agricultural law researchers will find the extensive reference sources useful for international comparative law research and analysis.

Introducing agricultural law and economics in Sub-Saharan Africa common law countries this authoritative guide covers such traditional law topics as contracts, torts, and property, as well as cutting-edge, region-relevant topics such as contracts with illiterate parties, contract farming, climate change, and transboundary water issues

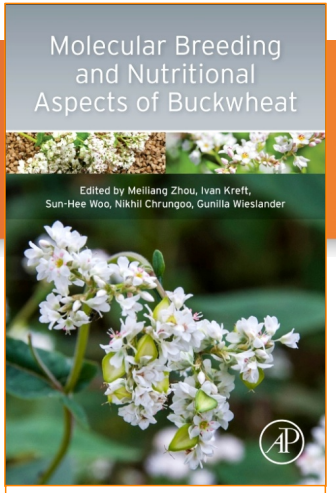
KEY FEATURES

- Offers research findings on such topics as food safety, climate change, transboundary natural resources, international sale of goods, patents, and trademarks to highlight the future sources of pressure on the agriculture industry
- Uses case-studies to provide real-world insights into the challenges and considerations of appropriate agricultural law development
- Challenges readers to carry out their own research in their areas of study, and to gain some understanding of the relationship between law, economics, and statistics
- Includes extensive resources, such as chapter summaries, study questions, and challenge questions at the end of each chapter to assist instructors and students in gaining full benefits from using the book
- Provides separate instructor and student study guides, a test bank, and test bank answers, in hardcopy and electronic formats

DESCRIPTION

Agricultural Law in Sub-Saharan Africa: Cases and Comments introduces the subject of agricultural law and economics to researchers, practitioners, and students in common law countries in Sub-Saharan Africa, and presents information from the legal system in Botswana, Gambia, Ghana, Lesotho, Malawi, Nigeria, Sierra Leone, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe. The law and economics approach entails the use of quantitative methods in research. This is consistent with the expectations in an applied economics field such as agricultural economics.

Covering the general traditional law topics in contracts, torts, and property, the book goes further to introduce cutting-edge and region-relevant topics, including contracts with illiterate parties, contract farming, climate change, and transboundary water issues. The book is supported by an extensive list of reference materials, as well as study and enrichment exercises, to deepen readers' understanding of the principles discussed in the book. It is a learning tool, first and foremost, and can be used as a stand-alone resource to teach the subject matter of agricultural law and economics to professionals new to the subject area as well as to students in law school, agricultural economics, economics, and inter-disciplinary classes.



Molecular Breeding and Nutritional Aspects of Buckwheat

Meiliang Zhou Biotechnology Research Institute, Chinese Academy of Agricultural Sciences (CAAS), Beijing, China; ***Ivan Kreft*** University of Ljubljana/Slovenian Forestry Institute, Slovenia ***Sun-Hee Woo*** Laboratory of Plant Breeding & Functional Proteomics, Department of Crop Science,College of Agriculture, Life & Environment Science Chungbuk National University, Cheongju, Korea.; ***Nikhil Chrungoo*** North Eastern Hill University, India; ***Gunilla Wieslander*** Uppsala University, Sweden

Through a comprehensive approach to the general characterization and genetic diversity of buckwheat in regions around the globe, this book demonstrates how the protein and bioactive compounds of buckwheat show high biological value for human health, making it an important crop not only dietary but, as a way to address global food security issues

ISBN: 978-0-12-803692-1

PUB DATE: June 2016

FORMAT: Paperback

PAGES: c. 330

AUDIENCE

Bachelor, master, PhD students of Agronomy or Plant Biology and buckwheat researchers seeking a comprehensive overview of present knowledge about the molecular breeding and food nutrition of Buckwheat.

KEY FEATURES

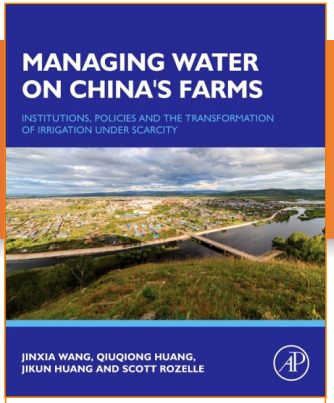
- Addresses all aspects of buckwheat research, including genetic resources, biological nutrition, genetic transformation, and molecular breeding
- Presents global characterization on the genetic resource of Fagopyrum, giving researchers insights that will help them breed new cultivars
- Explores the bioactivity of buckwheat
- Includes detailed information on the environmental factors that affect the growth and production of buckwheat

DESCRIPTION

Molecular Breeding and Nutritional Aspects of Buckwheat describes the general characterization and genetic diversity of buckwheat (family Polygonaceae, genus Fagopyrum) around the globe (especially in Russia, China, India, and Eastern Europe), the arid and cool regions where it is most frequently consumed, and nutritional information on a variety of buckwheat uses, including tea, groats, flour, and noodles.

With detailed information on buckwheat regeneration, genetic transformation, gene function analysis, and the metabolic engineering of bioactive compounds, the book guides readers through a variety of buckwheat varietal adaptations, providing foundation information on which additional research should be conducted.

It is divided into four parts, including genetic resource and phylogenetic relationship, food nutrition, growth and cultivation, and molecular breeding, with each section providing insights into the most current developments.



Managing Water on China's Farms

Institutions, Policies and the Transformation of Irrigation under Scarcity

Jinxia Wang Center for Chinese Agricultural Policy, Chinese Academy of Sciences, China
Qiuqiong Huang University of Arkansas, Fayetteville, USA; ***Jikun Huang*** Founder, Director and Professor, Center for Chinese Agricultural Policy, Chinese Academy of Sciences, and Professor, Institute of Geographical Sciences and Natural Resources Research, Chinese Academy of Science; ***Scott Rozelle*** Senior Fellow and co-director, Rural Education Action Program, Freeman Spogli Institute for International Studies, Stanford University, USA

This comprehensive book examines water availability issues in China, including a survey of potential solutions that provide a rich analysis of firsthand data that is helpful to graduate students in resource economics, as well as researchers and policymakers with an interest in China's water shortage challenges

ISBN: 978-0-12-805164-1
PUB DATE: April 2016
FORMAT: Hardback
PAGES: c. 348

AUDIENCE

Agricultural scientists and those involved in policy development facing water resource scarcity and developing efficient methods of using available resources

KEY FEATURES

- Uses case studies including problem, factors, proposed solutions, and pros and cons of each to facilitate translational learning and application
- Uses analyses of firsthand data collected from sources of irrigation water, irrigation systems, and water users
- Covers governance and operation and maintenance (O and M) practices
- Provides an informative, quantitative, and rigorous analysis of survey results
- Provides practical and valuable data, including the detailed micro-level data that enables estimating strategies

DESCRIPTION

Managing Water on China's Farms: Institutions, Policies and the Transformation of Irrigation under Scarcity is a comprehensive and current look at the water shortage problems in China. While China has emerged as a major player in the world economy, water is the most critical factor that limits the country's further growth. China's growing water problems also have a large impact worldwide, with public health as well as economic impacts. If China were to rely heavily on food produced outside of China, the massive volume of food imports would raise food prices internationally. This book examines a series of water issues, beginning with a description of the water shortage problems in China, particularly in the northern part of the country. It then looks at the government and farmers' responses and whether past policies have been effective in resolving the water problems.

Managing Water on China's Farms documents the change of existing and new water management institutional forms over time and across provinces throughout northern China, and then assesses the impacts of these changes in the rural sector. Finally, it examines potential solutions that the research has uncovered, answering the question: Who can build the bridge over China's troubled waters? Using analyses from information collected firsthand in China's rural villages, the series of surveys covers diverse geographic regions that are representative of north China and includes perspectives from multiple stakeholders such as village leaders, water managers, and farmers. The policy-oriented research and rich analysis in this book make it of interest to both policy makers and researchers with a focus on China water problems. This book can also be used in a Master or Ph.D. level resource economics course.

Ecofriendly Pest Management for Food Security

Omkar Department of Zoology, University of Lucknow, Lucknow, India

Focuses on the insect resistance that has developed as a result of pest control chemicals, and how new methods of environmentally complementary pest control can be used to suppress harmful organisms while protecting the soil, plants, and air around them

ISBN: 978-0-12-803265-7

PUB DATE: February 2016

FORMAT: Paperback

PAGES: c. 750

AUDIENCE

Graduate students of Zoology, Agriculture and other disciplines of Biological Sciences; researchers and policy makers in agriculture, food safety, and sustainability

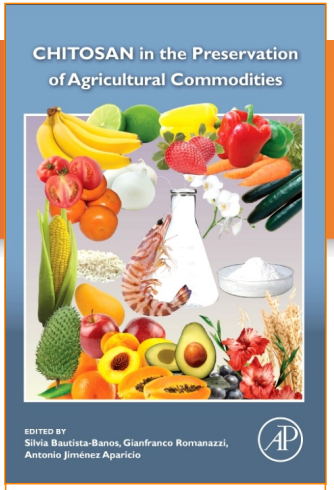
KEY FEATURES

- Addresses environmentally focused pest control with specific attention to its role in food security and sustainability
- Includes a range of pest management methods, from biological to nuclear
- Written by experts with extensive real-world experience

DESCRIPTION

Ecofriendly Pest Management for Food Security explores the broad range of opportunity and challenges afforded by Integrated Pest Management systems. The book focuses on the insect resistance that has developed as a result of pest control chemicals, and how new methods of environmentally complementary pest control can be used to suppress harmful organisms while protecting the soil, plants, and air around them.

As the world's population continues its rapid increase, this book addresses the production of cereals, vegetables, fruits, and other foods and their subsequent demand increase. Traditional means of food crop production face proven limitations and increasing research is turning to alternative means of crop growth and protection.



Chitosan in the Preservation of Agricultural Commodities

Edited by: ***Silvia Bautista-Banos*** Lecturer and Research Scientist, Postharvest Plant Pathology and Physiology, Centre of Biotic Products, National Polytechnic Institute, Mexico
Gianfranco Romanazzi Professor of Plant Pathology and Plant Disease Management, Marche Polytechnic University, Ancona, Italy
Antoinio Jiménez-Aparicio Lecturer and Research Scientist, Food Science and Technology, Centre of Biotic Products, National Polytechnic Institute, Mexico

Through a comprehensive approach to the topic of chitosan, the book covers its application in food preservation, various aspects of the control achieved by chitosan on different microorganisms affecting various horticultural commodities, grains, and ornamentals, and its modes of action

ISBN: 978-0-12-802735-6
PUB DATE: January 2016
FORMAT: Paperback
PAGES: c. 366

AUDIENCE

Researchers, academics and students in Agricultural sciences. Those involved in sustainable and organic agriculture and food conservation.

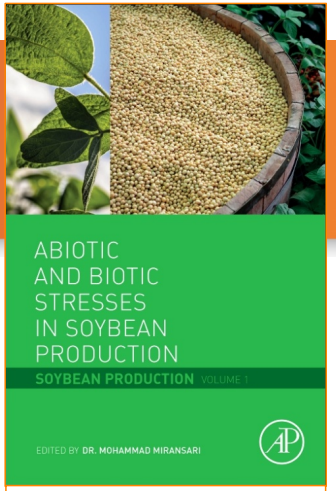
KEY FEATURES

- Analyzes chitosan chemical and functional properties
- Explores obtaining, characterizing, and developing chitosan coatings and fi lms for agricultural use
- Presents functional properties, antimicrobial potential, and modes of action of chitosan from a physiological, enzymatic, and molecular perspective
- Includes biological models of the activity of chitosan nanocomposites and nanoparticles

DESCRIPTION

Chitosan in the Preservation of Agricultural Commodities presents a cohesive overview of research topics regarding the production and characterization of chitosan, the development of coatings and fi lms, its functional properties, and antimicrobial potential of this compound on economically important agricultural commodities. It includes the modes of action from a physiological, enzymatic, and molecular perspective, and evaluations of the activity of chitosan nanocomposites and nanoparticles in biological models.

The first section deals with the chemical characteristics and functional properties of chitosan and new chitosan-based biomaterials intended for food preservation. The second section covers various aspects of the control achieved by chitosan on different microorganisms affecting various horticultural commodities, grains, and ornamentals, and its modes of action. The third section explores enzymatic and gene expression induction by chitosan application on fruit and vegetables; the fourth section offers insight on the use of chitosan nanocomposites in biological models associated with food conservation and control of microorganisms.



Abiotic and Biotic Stresses in Soybean Production

Soybean Production Volume 1

Edited by: ***Mohammad Miransari*** Prof. Dr. Mohammad Miransari,
Company Manager Dept of Books and Articles AbtinBerkeh Ltd. Co. Iran

ISBN: 978-0-12-801536-0

PUB DATE: January 2016

FORMAT: Hardback

PAGES: c. 326

AUDIENCE

Researchers, academicians and scientists in plant biology, plant physiology, plant molecular biology, crop production, plant-microbe interactions, microbiology, biotechnology, environment, etc. It is also of special significance to the industry sector, as the production and processing of soybean grains for food and oil production is an important process. Advanced level students in these areas.

Through a presentation of the important results of research in both field and greenhouse conditions, this book guides readers in effectively managing the chemical, physical, and biological factors that can put soybean production at risk, including the latest in genetics, signaling, and biotechnology

KEY FEATURES

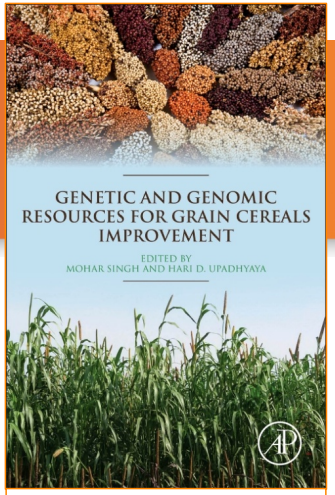
- Presents insights for the successful production of soybean based on chemical, physical and biologic challenges
- Includes the latest specifics on soybean properties, growth, and production, including responses to different stresses and their alleviation methods
- Offers recent advancements related to the process of N fixation and rhizobium, including signaling pathways and their practical use
- Explores the production of rhizobium inoculums at large-scale levels

DESCRIPTION

Abiotic and Biotic Stresses in Soybean Production: Soybean Production Volume One presents the important results of research in both field and greenhouse conditions that guide readers to effectively manage the chemical, physical, and biological factors that can put soybean production at risk.

Including the latest in genetics, signaling, and biotechnology, the book identifies these types of stresses, their causes, and means of avoiding, then addresses existing stresses to provide a comprehensive overview of key production yield factors.

By presenting important insights into the historical and emerging uses for soybean, the book educates readers on the factors for consideration as new uses are developed. It is an ideal complement to volume two, *Environmental Stress Conditions in Soybean Production*, that work together to provide valuable insights into crop protection.



Genetic and Genomic Resources for Grain Cereals Improvement

Mohar Singh National Bureau of Plant Genetic Resources, India
Hari D. Upadhyaya International Crops Research Institute for Semi-Arid Tropics, India

ISBN: 978-0-12-802000-5
PUB DATE: November 2015
FORMAT: Hardback
PAGES: c. 364

AUDIENCE
Cereal crop breeders, PGR researchers and crop biologists, advanced students

Insights into the performance achieved by applying new germplasm, trait mapping, allele mining, and other approaches to cereal genetics and genomics

KEY FEATURES

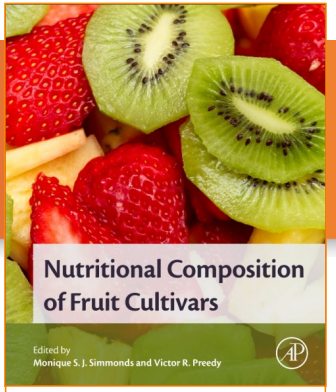
- Provides a single-volume resource on the global research work on grain cereals genetics and genomics
- Presents information for effectively managing and utilizing the genetic resources of this core food supply source
- Includes coverage of rice, wheat, maize, barley, sorghum, and pearl, finger and foxtail millets

DESCRIPTION

Genetic and Genomic Resources For Cereals Improvement is the first book to bring together the latest available genetic resources and genomics to facilitate the identification of specific germplasm, trait mapping, and allele mining that are needed to more effectively develop biotic and abiotic-stress-resistant grains.

As grain cereals, including rice, wheat, maize, barley, sorghum, and millets constitute the bulk of global diets, both of vegetarian and non-vegetarian, there is a greater need for further genetic improvement, breeding, and plant genetic resources to secure the future food supply.

This book is an invaluable resource for researchers, crop biologists, and students working with crop development and the changes in environmental climate that have had significant impact on crop production. It includes the latest information on tactics that ensure that environmentally robust genes and crops resilient to climate change are identified and preserved.



Nutritional Composition of Fruit Cultivars

Edited by: ***Monique Simmonds*** Royal Botanic Gardens, Kew Richmond, Surrey UK,
Victor Preedy Department of Dietetics, King's College London, UK

This book provides readers with the latest information on the health related properties of foods, making the documentation of the nutritive value of historical cultivars especially urgent, especially before they are lost and can't be effectively compared to modern cultivars.

ISBN: 978-0-12-408117-8
PUB DATE: October 2015
FORMAT: Hardback
PAGES: c. 786

AUDIENCE

Agriculturalists, Food scientists, food technologists, food industry workers from harvest to production and packaging. Also nutritionists interested in understanding dietary value differences

KEY FEATURES

- Presents the botanical aspects and composition of both traditional and modern plants, including in-depth insight into current research, and overall summary points for each fruit for consistent comparison and ease of reference
- Provides important information in the consideration of preservation, transference, or re-introduction of historical/traditional cultivars into current crop science
- Provides details on compositional and sensory parameters, from aroma and taste to micro- and macronutrients
- Includes data on nutraceuticals and novel components that have proven to impact on, or be important in, food quality, storage, processing, storage, and marketing

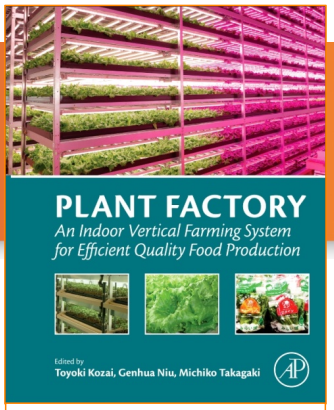
DESCRIPTION

Nutritional Composition of Fruit Cultivars provides readers with the latest information on the health related properties of foods, making the documentation of the nutritive value of historical cultivars especially urgent, especially before they are lost and can't be effectively compared to modern cultivars.

Because there is considerable diversity and a substantial body of the compositional studies directed towards commercial varieties, this information is useful for identifying traits and features that may be transposed from one variety to another.

In addition, compositional and sensory features may also be used for commercialization and to characterize adulteration. Detailed characterization of cultivars can be used to identify "super-foods". Alternatively, unmasked historical cultivars may be the focus of reinvigorated commercial practices.

Each chapter in this book has sections on the botanical aspects, the composition of traditional or ancient cultivars, the composition of modern cultivars, a focus on areas of research, the specialty of the communicating author of each chapter, and summary points.



Plant Factory

An Indoor Vertical Farming System for Efficient Quality Food Production

Edited by: ***Toyoki Kozai*** Center for Environment, Health and Field Sciences, Chiba University, Japan
Genhua Niu Associate Professor, Texas AgriLife Research, El Paso, Texas A&M University, El Paso, TX, USA
Michiko Takagaki Center for Environment, Health and Field Sciences, Chiba University, Japan

This book provides expert insights into the best practices and lessons learned regarding the growth of food supply plants in controlled environments using artificial light

ISBN: 978-0-12-801775-3
PUB DATE: November 2015
FORMAT: Paperback
PAGES: c. 406

AUDIENCE

Researchers, students and industry professionals in agriculture, food engineering, policy and regulation

KEY FEATURES

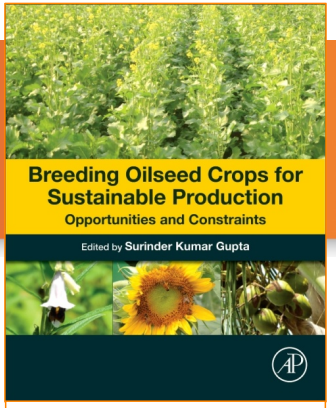
- Provides full-scope insight on plant farm, from economics and planning to life-cycle assessment
- Presents state-of-the-art plant farm science, written by global leaders in plant farm advancements
- Includes case-study examples to provide real-world insights

DESCRIPTION

Plant Factory: An Indoor Vertical Farming System for Efficient Quality Food Production provides information on a field that is helping to offset the threats that unusual weather and shortages of land and natural resources bring to the food supply.

As alternative options are needed to ensure adequate and efficient production of food, this book represents the only available resource to take a practical approach to the planning, design, and implementation of plant factory (PF) practices to yield food crops. The PF systems described in this book are based on a plant production system with artificial (electric) lights and include case studies providing lessons learned and best practices from both industrial and crop specific programs.

With insights into the economics as well as the science of PF programs, this book is ideal for those in academic as well as industrial settings.



Breeding Oilseed Crops for Sustainable Production

Opportunities and Constraints

Edited by: ***Surinder Kumar Gupta*** SK University of Agricultural Sciences & Technology, Division of Genetics and Plant Breeding, Jammu, India

ISBN: 978-0-12-801309-0

PUB DATE: October 2015

FORMAT: Hardback

PAGES: c. 568

AUDIENCE

Oilseed breeders, genetic engineers, biologists, pathologists, entomologists and taxonomists as well as scholars and post-graduate students in understanding the crop better and evolving effective strategies for the development of new and superior crop varieties and sustaining oil crop production

This book provides the only resource focused on enhancing the quality and quantity of oilseed crop production, exploring further insights into the acceleration of the breeding of sustainable and superior varieties.

KEY FEATURES

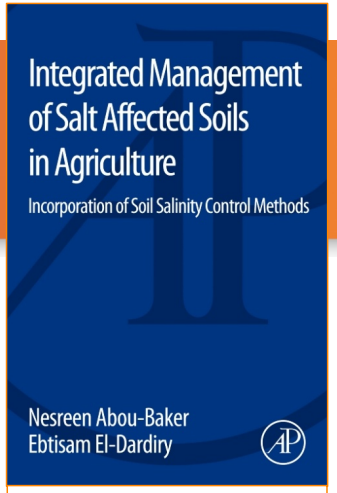
- Describes various methods and systems to achieve sustainable production in all major oilseed crops
- Addresses breeding, biology and utilization aspects simultaneously including those species whose information is not available elsewhere
- Includes information on modern biotechnological and molecular techniques and production technologies
- Relevant for international government, industrial and academic programs in research and development

DESCRIPTION

Breeding Oilseed Crops for Sustainable Production: Opportunities and Constraints presents key insights into accelerating the breeding of sustainable and superior varieties.

The book explores the genetic engineering/biotechnology that has played a vital role in transforming economically important traits from distant/wild species to cultivated varieties, enhancing the quality and quantity of oil and seed yield production. Integrated nutrient management, efficient water management, and forecasting models for pests diseases outbreaks and integrated pest and pest management have also added new dimensions in breeding for sustainable production. With the rise in demand, the scientific community has responded positively by directing a greater amount of research towards sustainable production both for edible and industrial uses.

Covering the latest information on various major world oil crops including rapeseed mustard, sunflower, groundnut, sesame, oilpalm, cotton, linseed/flax, castor and olive, this book brings the latest advances together in a single volume for researchers and advanced level students.



Integrated Management of Salt Affected Soils in Agriculture

Incorporation of Soil Salinity Control Methods

Nesreen Houssein Ahmen Abou-Baker Associate Prof., Soils and Water Use Dept., Agricultural and Biological Div., National Research Centre, Dokki, Cairo, Egypt
Ebtisam Abdelmohsen El-Dardiry Water Relations and Field Irrigation Dept., Agricultural Division, National Research Center, El-Behouth St., Eldokki, Cairo, Egypt

Practical methodologies for measuring and correcting soil quality for optimal crop production

KEY FEATURES

- Provides both agricultural science and soil science perspectives on soil salinity
- Identifies differences in salt-affected soils and appropriate remediation options
- Includes methodologies based on existing scenario and targeted outcomes

DESCRIPTION

Integrated Management of Salt Affected Soils in Agriculture is a concise guide to evaluating and addressing soil issues related to saline content. Methods focused, the book combines agricultural and soil-based insights to efficiently remediate salt-affected soil.

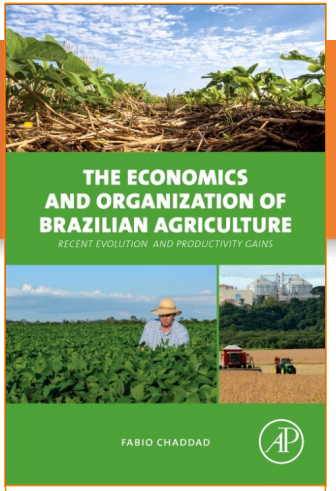
Environmental stress conditions such as salinity have a devastating impact on plant growth and yield, causing considerable loss to agricultural production worldwide. Soil salinity control prevents soil degradation by salinization and reclaim already saline soils. This book will help develop the proper management procedures, to solve problems of crop production on salt-affected soils.

ISBN: 978-0-12-804165-9
PUB DATE: October 2015
FORMAT: Paperback
PAGES: c. 66

AUDIENCE

Researchers and advanced students in agricultural soil remediation, soil quality, crop production, and extension teams seeking alternative cropping options

FOOD SCIENCE, TECHNOLOGY & NUTRITION
Please contact your Elsevier Sales or Customer Service Representative



The Economics and Organization of Brazilian Agriculture

Recent Evolution and Productivity Gains

Fabio Chaddad Associate professor, Agricultural Economics, University of Missouri, USA with joint appointment at Insper Institute of Education and Research, São Paulo, Brazil

Using Brazil as a guide, this book presents insights on agriculture and tactics that can be used for gains in productivity and international competitiveness, also providing insightful examples for global policymakers

ISBN: 978-0-12-801695-4

PUB DATE: September 2015

FORMAT: Hardback

PAGES: c. 164

AUDIENCE

Industry professionals and policy makers; the book may also be used as complementary reading in agribusiness management and international development courses.

KEY FEATURES

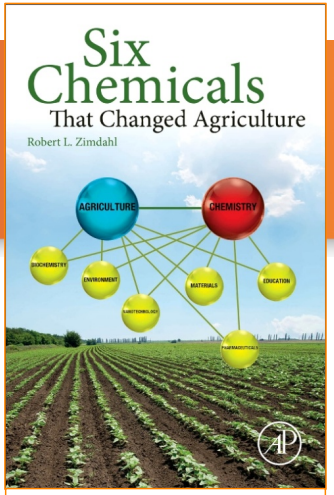
- Provides important and practical insights into achievable agricultural options via case studies
- Addresses the use of natural resources, technological advances, and management systems to create viable, adaptive economic growth
- Applies lessons learned in Brazil to improving both economic and ecological resource-sustainable agriculture for other regions and countries

DESCRIPTION

The Economics and Organization of Brazilian Agriculture: Recent Evolution and Productivity Gains presents insights on Brazilian agriculture and its impressive gains in productivity and international competitiveness, also providing insightful examples for global policymakers.

In Brazil, as in many countries, many economists and policymakers believe that agriculture is a traditional, low-tech sector that crowds out the development of other economic sectors and the country. This book shows that this anti-agriculture bias is ill-informed, and with population growth, rising incomes, urbanization and diet changes – especially in developing countries like China and India – on the rise, the demand for food is expected to double in the next 40 years.

Brazil has the natural resources, technology and management systems in place to benefit from this expected growth in food consumption and trade. Through real-world examples, the book shows how other low-latitude countries with tropical climate and soils like Brazil – especially in sub-Saharan Africa – can benefit from the agricultural technology, production, and management systems developed in Brazil. Case studies in each of three key categories, including technology, resource management, and effective government programs provide valuable insights into effective decision-making to maximize the effect of each.



ISBN: 978-0-12-800561-3

PUB DATE: July 2015

FORMAT: Hardback

PAGES: c. 202

AUDIENCE

Researchers and students in agro-chemical engineering, crop development, agriculture science, food toxicology, food safety

Six Chemicals That Changed Agriculture

Robert L Zimdahl Professor Emeritus, Dept of Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, CO, USA

The challenges and opportunities of the use of key agricultural-use chemicals are presented, compared and contrasted with the real and frequently assumed problems that follow use

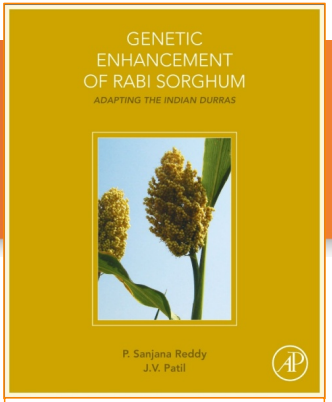
KEY FEATURES

- Offers an historical analysis of the discovery and development some aspects of the chemistry of modern agriculture
- Addresses the advantages, disadvantages, desirable and undesirable results of the use of each of the chosen chemicals and compares and contrasts the real and frequently assumed problems of their use
- Provides valuable insights into the history and application of these focused chemicals, enabling readers to apply the lessons to new agricultural chemical developments

DESCRIPTION

Six Chemicals That Changed Agriculture is a scientific look at how the chemicals used in today's food production were developed, evaluated, and came to be in wide-spread use. From fertilizers to pest management, antibiotics to DNA, chemicals have transformed the way our food is grown, protected, and processed.

Agriculture is the world's most important environment interaction, the essential human activity, and an increasingly controversial activity because of its use and presumed misuse of chemistry. The major characteristics of US agriculture for at least the last six decades have been rising productivity, declining number of mid-size farms, increasing farm size, an increasing percentage of farm production on fewer, large farms, increasing dependence of chemical technology and more developmental research being done by the agricultural chemical industry rather than by independent land-grant universities. Another equally important feature of modern agriculture is wide-spread suspicion of its technology by the public. The book will recount examples of this suspicion related to specific chemicals and present the essence of the suspicion and its results.



Genetic Enhancement of Rabi Sorghum

Adapting the Indian Durras

Sanjana Reddy Directorate of Sorghum Research, Hyderabad, India
J.V. Patil Directorate of Sorghum Research, Hyderabad, India

A reference on the study of durras and their breeding, focusing on *rabi* sorghum and strategies to improve world production of this important crop

ISBN: 978-0-12-801926-9

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 240

AUDIENCE

Researchers working on post-rainy or winter sorghum to formulate suitable research strategies. M.Sc. and Ph.D. students who wish to understand the concepts of breeding in self- or often cross-pollinated crops.

KEY FEATURES

- Presents both the historical background and most recent research done in breeding *rabi* sorghum for more global production
- Provides information on the adaptation of the crop and the ways it has migrated to the currently known crop, which is cultivated in winter season and commonly called as *rabi* sorghum
- Explores strategies for resilience as the crop must be prepared to withstand rapid and varying changes in climate

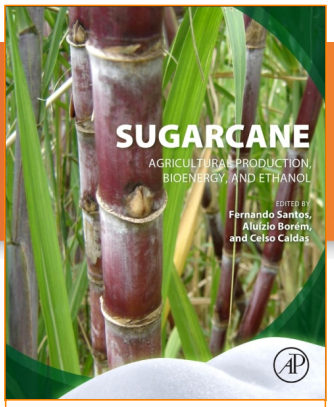
DESCRIPTION

Genetic Enhancement of Rabi Sorghum – Adapting the Indian Durras presents both the historical background and the recent research done in breeding this important world crop for more global production. Its chapters cover topics in origin and taxonomy, morphology and breeding behavior, genetics, and cytogenetics, also looking at production, nutrition, and alternate uses.

The durra race is Ethiopian in origin and its introgression with wild forms permitted adaptation to drier conditions. These have migrated and adapted to the currently known crop that is cultivated in the winter season and commonly called *rabi* sorghums.

Grown under receding soil moisture conditions, *rabi* sorghums have tolerance to abiotic stresses apart from biotic stresses, unlike the rainy sorghums that are grown widely in the world. However, they must be more resilient to rapid changes in climate, for example. The variability from winter sorghums is being introgressed into rainy sorghums.

With the yield plateaus reached and sorghum gaining importance as a food crop, this book will be of importance to those studying durras and their breeding.



ISBN: 978-0-12-802239-9

PUB DATE: May 2015

FORMAT: Paperback

PAGES: c. 468

AUDIENCE

Scientists, academics and students in agronomy and in the sugarcane community

Sugarcane

Agricultural Production, Bioenergy and Ethanol

Edited by: ***Fernando Santos*** Universidade Estadual do Rio Grande Do Sul, Porto Alegre, RS, Brazil

Aluízio Borém Departamento de Fitotecnia, Universidade Federal de Vicosa, Brazil

Celso Caldas Central Analitica LTDA, Maceio, AL, Brazil

A key resource for the responsible and efficient growth, harvest and utilization of sugarcane, exploring new and existing markets for bioenergy

KEY FEATURES

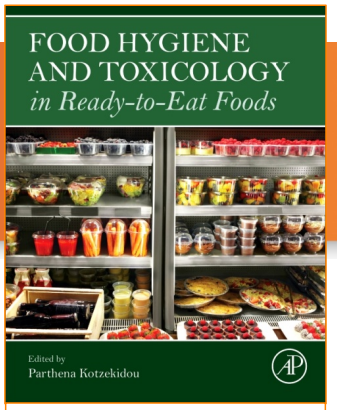
- Focuses on sugarcane production and processing for bioenergy
- Provides a holistic approach to sugarcane's potential – from the successful growth and harvest of the plant to the end-use product
- Presents important information for "green energy" options

DESCRIPTION

Sugarcane: Agricultural Production, Bioenergy and Ethanol explores this vital source for "green" biofuel from the breeding and care of the plant all the way through to its effective and efficient transformation into bioenergy.

The book explores sugarcane's 40 year history as a fuel for cars, along with its impressive leaps in production and productivity that have created a robust global market. In addition, new prospects for the future are discussed as promising applications in agroenergy, whether for biofuels or bioelectricity, or for bagasse pellets as an alternative to firewood for home heating purposes are explored.

Experts from around the world address these topics in this timely book as global warming continues to represent a major concern for both crop and green energy production.



Food Hygiene and Toxicology in Ready to Eat Foods

Edited by: ***Parthena Kotzekidou*** Professor of Food Microbiology, Department of Food Science and Technology, Faculty of Agriculture, Aristotle University of Thessaloniki, Greece

Incorporating real life examples for microbiological risk assessment and reduction in the food industry, this detailed reference shares the latest research and advances in infectious and noninfectious hazards of ready-to-eat and minimally processed foods along with strategies for avoiding cross contamination

ISBN: 978-0-12-801916-0

PUB DATE: June 2016

FORMAT: Hardback

PAGES: c. 500

AUDIENCE

Food industry professionals: food scientists; food safety professionals, food microbiologists, food technologists; public health workers.

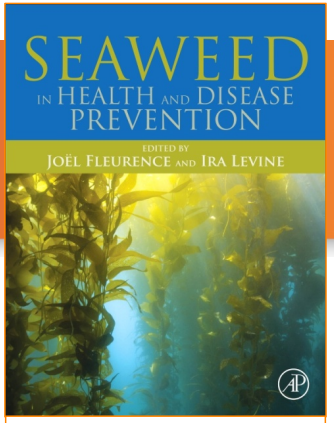
KEY FEATURES

- Provides the latest on research and development in the field of food safety incorporating practical real life examples for microbiological risk assessment and reduction in the food industry
- Includes specific aspects of potential contamination and the importance of various risks associated with ready-to-eat-foods
- Describes potential harmful agents that may arise in foods throughout processing and packaging process
- Presents information on psychrotolerant sporeforming pathogens and food poisoning strains in different countries, effect of temperature, Salmonella, Listeria, Clostridium difficile, Escherichia coli, Bacillus cereus, Norovirus, parasites, fungal flora, enterotoxins, and more

DESCRIPTION

Food Hygiene and Toxicology in Ready-to-Eat Foods is a solid reference for anyone in the food industry needing to understand the complex issues and mechanisms of control of biological and non-biological hazards to ensure food safety. Infectious and non-infectious hazards of ready to eat food and minimally processed foods are covered in detail. Also discussed are trade-offs to avoid cross contamination, such as when minimizing one risk increases another.

The book is written by an international team of experts providing the most up-to-date research in the field and offering current applications and methods to assist in developing future solutions. Strategies and recommendations for each food include reducing chemical or biological hazards and harm, and include examples such as: reducing cross contamination of pathogens by self-cleaning devices, the use of antimicrobial coatings, and prior spray cleaning of fruit surfaces. A broad coverage of foods includes fruits and vegetables, seeds and nuts, meat and dairy, raw foods, minimally processed foods, and prepared foods.



Seaweed in Health and Disease Prevention

Edited by: ***Joël Fleurence*** Professor of Marine Biology and Biochemistry, Laboratory "Sea, Molecules, Health", University of Nantes, Nantes, France
Ira Levine Professor of Natural and Applied Sciences, University of Southern Maine, Lewiston, ME, USA

Outlining how seaweed can be used as a source of macronutrients and micronutrients as well as nutraceuticals, this novel reference presents the potential for seaweed, macroalgae, and their extracts to enhance health and treat disease

ISBN: 978-0-12-802772-1
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 462

AUDIENCE

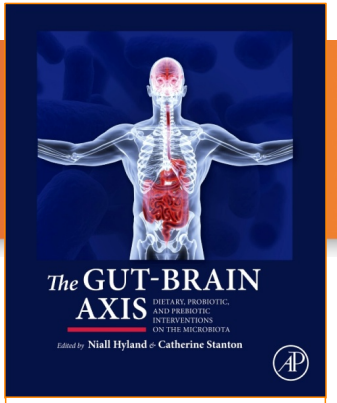
food scientists/ technologists, nutraceutical/supplement product developers. Libraries for researchers, graduate students and fellows in Food Science, Aquaculture, Health, and Nutrition.

KEY FEATURES

- Combines foundational information and nutritional context, offering a holistic approach to the relationship between sea vegetables, diet, nutrition, and health
- Provides comprehensive coverage of health benefits, including sea vegetables as sources of nutraceuticals and their specific applications in disease prevention, such as angiogenesis, diabetes, fungal infections, and others
- Includes Dictionary of Terms, Key Facts, and Summary points in each chapter to enhance comprehension
- Includes information on toxic varieties and safe consumption guidelines to supplement basic coverage of health benefits

DESCRIPTION

Seaweed in Health and Disease Prevention presents the potential usage of seaweed, macroalgae, and their extracts for enhancing health and disease. The book explores the possibilities in a comprehensive way, including outlining how seaweed can be used as a source of macronutrients and micronutrients, as well as nutraceuticals. The commercial value of seaweed for human consumption is increasing year-over-year, and some countries harvest several million tons annually. This text lays out the properties and effects of seaweeds and their use in the food industry, offering a holistic view of the ability of seaweed to impact or effect angiogenesis, tumors, diabetes and glucose control, oxidative stress, fungal infections, inflammation and infection, the gut, and the liver.



The Gut-Brain Axis

Dietary, Probiotic, and Prebiotic Interventions on the Microbiota

Edited by: ***Niall Hyland*** Department of Pharmacology & Therapeutics Faculty, APC Microbiome Institute, University College Cork, Cork, Ireland
Catherine Stanton Teagasc Moorepark Food Research Centre, Moorepark, Fermoy, Co. Cork, Cork, Ireland

This cutting-edge book explores how diet, probiotics, and prebiotics can help modulate the microbiome and how such interventions can impact the gut-brain axis. Examines the potential for microbial manipulation as a therapeutic avenue in central nervous system disorders in which an altered microbiota has been implicated.

ISBN: 978-0-12-802304-4
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 630

AUDIENCE

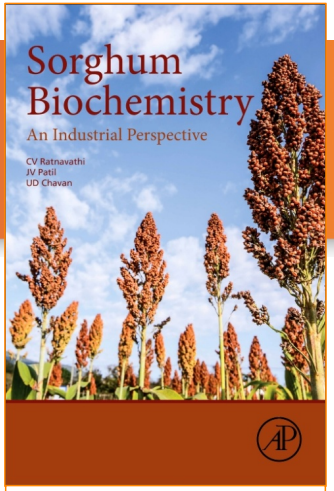
Professors, Associate Professors, PostDocs, Graduate Students, and Team Leaders researching: Gut-brain axis, Neuro-Gastroenterology, Microbiology, Nutrition, Food Science, Psychiatry, Behavioral Sciences, Neuroscience, Translational Research

KEY FEATURES

- Focuses on specific areas in which the microbiota has been implicated in gut-brain communication
- Examines common mechanisms and pathways by which the microbiota may influence brain and behavior
- Identifies novel therapeutic strategies targeted toward the microbiota in the management of brain activity and behavior

DESCRIPTION

The Gut-Brain Axis: Dietary, Probiotic, and Prebiotic Interventions on the Microbiota examines the potential for microbial manipulation as a therapeutic avenue in central nervous system disorders in which an altered microbiota has been implicated, and explores the mechanisms, sometimes common, by which the microbiota may contribute to such disorders.



Sorghum Biochemistry: An Industrial Perspective

CV Ratnavathi Principal Scientist, Biochemistry and PI of NFBSFARA project on sweet sorghum, PI of DBT funded project on functional foods of sorghum
Jagannath Vishnu Patil Director, Research Management, Directorate of Sorghum Research, Hyderabad (ICAR)
UD Chavan Senior Cereal Food Technologist, Department of Food Science and Technology, Mahatma Phule Krishi Vidyapeeth, Rahuri, Dist, Ahmednagar, Maharashtra

This helpful guide explores the many uses for sorghum in industry and biofuels featuring a detailed examination of the physical and biochemical qualities of the grain, the role sorghum plays in industries like brewing and ethanol production, and the mechanics of post-harvest processing and value addition

ISBN: 978-0-12-803157-5

PUB DATE: June 2016

FORMAT: Paperback

PAGES: c. 364

AUDIENCE

Researchers involved in postharvest technology and value addition, cereal chemists and also pathologists and toxicologists. This can also be a reference book for students doing post graduate study in post-harvest technology and food science, food processing technology

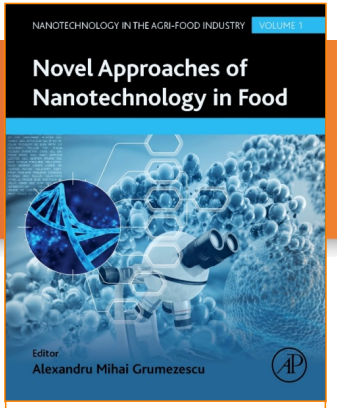
KEY FEATURES

- Provides detailed biochemical studies on grain sorghum to inform researchers grappling with similar issues
- Offers foundational information on the quality and composition of sorghum as a grain
- Covers a variety of uses for sorghum in many industries, including food and beverage, energy, and brewing
- Includes photos and illustrations to enhance the understanding of processes and sorghum biochemistry

DESCRIPTION

Sorghum Biochemistry: An Industrial Perspective explores the many uses for sorghum in industry and biofuels. Not only does it offer a detailed understanding of the physical and biochemical qualities of the grain, it also takes an in-depth look at the role sorghum plays in such industries as brewing and ethanol production and the mechanics of post-harvest processing and value addition.

Sorghum has long been an important staple in Africa and Asia, but its value goes far beyond its uses in human and animal consumption. Sorghum is also used in many industries, including waxes, packing material, wall board, ethanol, beverages, and brewing, and one variety called sweet sorghum has also been used as a bioenergy crop. *Sorghum Biochemistry: An Industrial Perspective* offers a closer look at how the grain is used in such a variety of ways, and how we can continue to optimize its potential.



Novel Approaches of Nanotechnology in Food

Nanotechnology in the Food Industry Volume 1

Edited by: ***Alexandru Mihai Grumezescu*** Assistant Professor, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science and Faculty of Medical Engineering, Politehnica University of Bucharest, Romania

This comprehensive book offers an overview of the potential applications of nanotechnology in food science and industry, discussing potential advancements of nanotechnology in the food industry and providing a reference for how novel approaches to nanotechnology can advance all of food science through proven research results and industrial applications

ISBN: 978-0-12-804308-0

PUB DATE: June 2016

FORMAT: Hardback

PAGES: c. 770

AUDIENCE

professionals, researchers, academic staff and students across all of food science

A Volume in the Nanotechnology in the Food Industry Series.

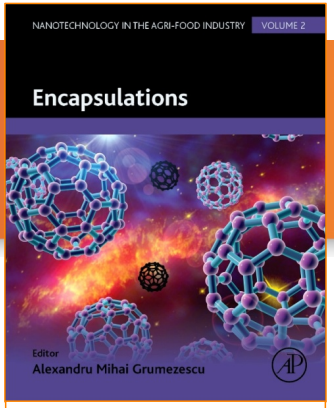
KEY FEATURES

- Includes the most up-to-date information on nanotechnology applications within the food industry
- Presents various approaches for innovation based on scientific advancements in the field of nanotechnology
- Provides methods and techniques for research analysis using novel technologies across the food chain
- Covers potential benefits and methods of risk assessment for food safety

DESCRIPTION

Novel Approaches of Nanotechnology in Food: Nanotechnology in the Food Industry, Volume 1, is a comprehensive overview of the various potential applications of nanotechnology in the field of food science and its successful and effective implementation. It is a broad introduction to the success of nanotechnology and potential future advancements of this technology within the food industry, and provides a reference for how novel approaches to nanotechnology can advance all of food science through proven research results and industrial applications.

Health and well-being are key drivers for the food industry. Market forces necessitate innovation throughout the whole food chain, from sourcing raw materials and ingredients, food processing, quality control of finished products, and packaging. Nanotechnology, coupled with novel interdisciplinary approaches and processing methods, can help resolve the huge challenges faced by the food and bioprocessing industries to develop and implement systems that produce qualitative and quantitative foods which are safe, sustainable, environmentally friendly, and efficient.



Encapsulations

Nanotechnology in the Food Industry Volume 2

Alexandru Mihai Grumezescu Assistant Professor, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science and Faculty of Medical Engineering, Politehnica University of Bucharest, Romania

This helpful book covers the novel use of nanotechnology in encapsulation for food applications, nanoencapsulation processes, and materials used in nanoencapsulation assessing which applications are most beneficial to the food industry and providing useful tools to improve the delivery of bioactive molecules and living cells into foods

ISBN: 978-0-12-804307-3

PUB DATE: June 2016

FORMAT: Hardback

PAGES: c. 770

AUDIENCE

food engineers, bioengineers, researchers and professionals in microencapsulation industries, food biochemistry, graduate students, professionals, researchers, academic staff and students across all of food science

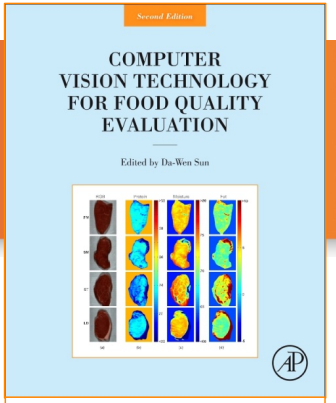
A Volume in the Nanotechnology in the Food Industry Series.

KEY FEATURES

- Includes the most up-to-date information on nanoencapsulation and nanocontainer-based delivery of antimicrobials
- Presents nanomaterials for innovation based on scientific advancements in the field
- Provides control release strategies to enhance bioactivity, including methods and techniques for research and innovation
- Provides useful tools to improve the delivery of bioactive molecules and living cells into foods

DESCRIPTION

Encapsulations: Nanotechnology in the Food Industry, Volume 2, serves as a helpful guide to the use of nanoencapsulation in the food industry for fermenting food, promoting food stability, and producing antimicrobials for food safety and quality. This novel approach also provides barriers between sensitive bioactive materials and the environment to allow taste and aroma differentiation and to mask bad flavors or smells, increases the bioavailability of food ingredients, improves the solubility of poorly water-soluble ingredients, enables higher ingredient retention during the food production process, and increases shelf life. This book covers nanotechnology in encapsulation for food applications, nanoencapsulation processes, and materials used in nanoencapsulation, and also assesses which applications are most beneficial to the food industry.



Computer Vision Technology for Food Quality Evaluation, 2e

Edited by: ***Da-Wen Sun*** Professor of Food Engineering, National University of Ireland, Dublin (University College Dublin), Agriculture & Food Science Centre

Provides engineers, researchers, technologists and students readily accessible information to develop an efficient method for food quality assessment

ISBN: 978-0-12-802232-0

PREVIOUS EDITION ISBN: 978-0-12-373642-0

PUB DATE: May 2016

FORMAT: Hardback

PAGES: c. 636

AUDIENCE

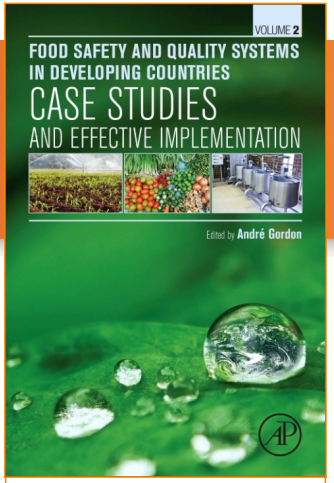
Engineers and technologists working in research and development and operations within the food industry, instructors and students in food engineering and food technology

KEY FEATURES

- Thoroughly explains what computer vision technology is, what it can do, and how to apply it for food quality evaluation
- Includes a wide variety of computer vision techniques and applications to evaluate a wide variety of foods
- Describes the pros and cons of different techniques for quality evaluation

DESCRIPTION

Computer Vision Technology for Food Quality Evaluation, Second Edition, continues to be a valuable resource to engineers, researchers, and technologists in research and development, as well as a complete reference to students interested in this rapidly expanding field. This new edition highlights the most recent developments in imaging processing and analysis techniques and methodology, captures cutting-edge developments in computer vision technology, and pinpoints future trends in research and development in computer vision technology for food quality and safety evaluation and control. It is a unique reference that provides a deep understanding of the issues of data acquisition and image analysis and offers techniques to solve problems and further develop efficient methods for food quality assessment.



Food Safety and Quality in Developing Countries

Volume II: Case Studies of Effective Implementation

Edited by: ***Andre Gordon*** Managing Director, Technological Solutions Limited, Jamaica

The comprehensive book provides pertinent information related to pressing global problems aligning with food safety, food security, governance, environment, and sustainable development in an age of globalization, covering the application of science, the transformation of production systems, regulatory underpinnings, and trade and marketing considerations

ISBN: 978-0-12-801226-0

PUB DATE: May 2016

FORMAT: Hardback

PAGES: c. 260

AUDIENCE

Food safety practitioners, regulators around the world; trade practitioners, international trade lawyers, exporters in developing countries (globally), buyers interested in imports from developing countries, international organizations, universities and lecturers on food safety, food export trading house businesses; Consultants, Food Science students, agriculture students

KEY FEATURES

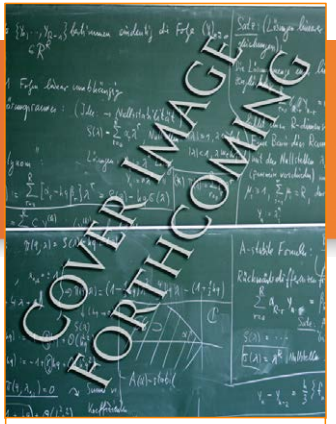
- Provides comprehensive information on Blighia sapida, covering its agronomy, geographic antecedents, food science, production, biochemistry, toxicity, analytical determination, pathology of the attendant illness, application of risk assessment, risk analysis, and mitigation strategies for the implementation of food safety
- Offers different strategies to handle specific SPS and TBTs which affect food exports
- Presents how to address market access issues and how to effectively implement risk and hazard mitigation strategies

DESCRIPTION

Food Safety and Quality in Developing Countries, Volume II: Case Studies of Effective Implementation examines the scientific, trade, organizational, national infrastructural, and systems implementation aspects of successfully exporting processed traditional foods from developing countries to developed country markets.

It uses the story of Jamaica's enigmatic national fruit, the ackee, as the main example to explore concerns of risk analysis and management and toxicology, also discussing analytical approaches in processing that ensure food safety and the regulatory aspects/issues of safety.

The book also covers the application of science, the transformation of production systems, regulatory underpinnings, and trade and marketing considerations of a traditional product as an example of overcoming market access challenges within established trading systems. It represents the only book that provides a comprehensive, case study-based insight into trade and market access options for traditional export products from developing country markets.



Cold Plasma in Food and Agriculture

Fundamentals and Applications

Edited by: ***NN Misra*** 79GTECH, Research & Development, General Mills India, Mumbai, India
Oliver Schlüter Leibniz Institute for Agricultural Engineering Potsdam-Bornim (ATB), Postdam, Germany
PJ Cullen BioPlasma Group, School of Food Science & Environmental Health, Dublin Institute of Technology, Ireland

This essential reference explores cutting-edge developments on the nonthermal plasma technology used to improve food safety and quality, and is useful for food scientists and engineers as well as biologists, chemists, and physicists interested in applying novel plasma technology to food and other sensitive biomaterials

ISBN: 978-0-12-801365-6
PUB DATE: May 2016
FORMAT: Paperback
PAGES: c. 190

AUDIENCE

Primary Market: food science researchers, engineers in industry
Secondary Market: researchers in food processing, food technology, food chemists, and physicists, R and D, A and G, industry

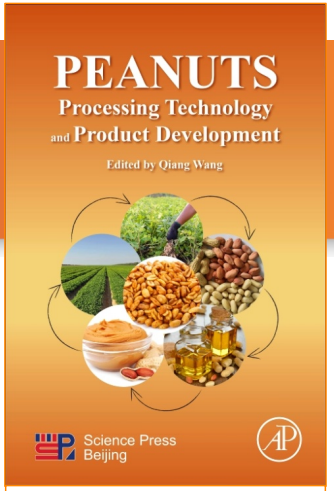
KEY FEATURES

- Examines the topic of cold plasma technology for food applications
- Demonstrates state-of-the-art developments in plasma technology and potential solutions to improve food safety and quality
- Presents a solid introduction for readers on the topics of plasma physics and chemistry that are required to understand biological applications for foods
- Serves as a roadmap for future developments for food scientists, food engineers, and biologists, chemists, and physicists working in this emerging field

DESCRIPTION

Cold Plasma in Food and Agriculture: Fundamentals and Applications is an essential reference offering a broad perspective on a new, exciting, and growing field for the food industry. Written for researchers, industry personnel, and students interested in nonthermal food technology, this reference will lay the groundwork of plasma physics, chemistry, and technology, and their biological applications.

Food scientists and food engineers interested in understanding the theory and application of nonthermal plasma for food will find this book valuable because it provides a roadmap for future developments in this emerging field. This reference is also useful for biologists, chemists, and physicists who wish to understand the fundamentals of plasma physics, chemistry, and technology and their biological interactions through applying novel plasma sources to food and other sensitive biomaterials.



Peanuts: Processing Technology and Product Development

Edited by: ***Qiang Wang*** Deputy Director of the Institute of Agro-products Processing Science and Technology, Chinese Academy of Agricultural Sciences, Director of the National Agro-products Processing Research and Development Center

An overall review of advanced theories and latest technologies in the production and processing of peanuts and their by-products

ISBN: 978-0-12-809595-9

PUB DATE: May 2016

FORMAT: Paperback

PAGES: c. 354

AUDIENCE

Students majoring in food science and engineering; researchers and scientists in grain and oil processing; technicians in peanut process industries.

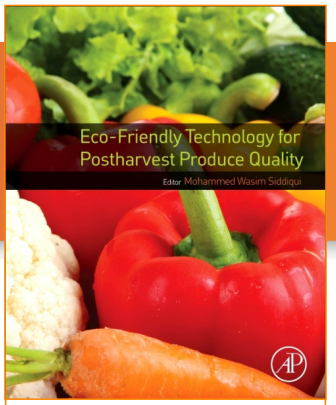
KEY FEATURES

- Providing the latest, worldwide research in the field of peanut production and processing, incorporating the author's research findings on new product development.
- All technologies presented in the book have been partly or fully applied in the peanut industry, providing effective guidance for the processing of peanuts and their by-products.
- Includes topics on peanut production, peanut research progress, main peanut components, raw material quality evaluation, processing and utilization of peanut products (oil, protein) and by-products (peptide, polyphenol, polysaccharide, dietary fiber).

DESCRIPTION

Peanuts: Processing Technology and Product Development provides an overall review of the latest peanut and peanut-related research development worldwide, including not only peanut production and processing progress, but also peanut-related products (oil, protein) production technologies, and by-products utilization technologies (peptides, polyphenol, polysaccharide and dietary fiber). It focuses on technology practicability, and all the technologies introduced, have been partly or fully applied.

This valuable book will be an important reference for technicians and R&D persons in the peanut processing industry. It can also be used as reference book for professional teaching and scientific research in the field of food science and engineering.



Eco-Friendly Technology for Postharvest Produce Quality

Mohammed Wasim Siddiqui Assistant Professor and Scientist, Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India

This valuable resource assesses emerging eco-friendly technologies for maintaining the postharvest quality of fresh produce analyzing alternative and traditional methodologies and highlighting the advantages and limitations of each

ISBN: 978-0-12-804313-4

PUB DATE: April 2016

FORMAT: Paperback

PAGES: c. 360

AUDIENCE

professionals working in the postharvest industry, postharvest technologists, fresh produce management, food safety and quality professionals, postharvest physiologists, professionals working in the research for developing new technologies, graduate students

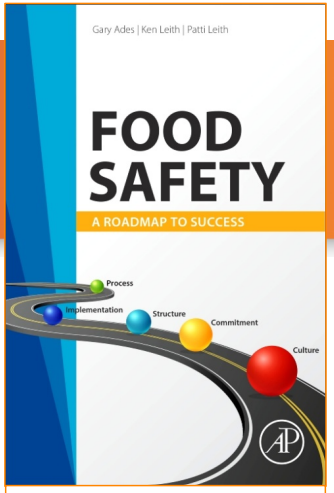
KEY FEATURES

- Includes appropriate approaches, technologies, and control parameters necessary to achieve shelf-life extension without compromising produce quality
- Presents successful food safety methods between the time produce is harvested to consumption
- Includes the latest information on preservation technologies using novel chemical methods, active packaging, and monitoring the effect of environmental stresses on quality and shelf life of agricultural produce

DESCRIPTION

Eco-Friendly Technology for Postharvest Produce Quality presents the scope of emerging eco-friendly technologies to maintain the postharvest quality of fresh produce in terms of safety and nutrition. The book covers an analysis of the alternative and traditional methodologies pointing out the significant advantage and limitations of each technique. It provides a standard reference work for the fresh produce industry in postharvest management to extend shelf life by ensuring safety first and then nutritional or sensory quality retention.

Fruits and vegetables are a huge portion of the food supply chain and are depended on globally for good health and nutrition. The supply of good food, however, greatly depends on good postharvest handling practices. Although substantial research has been carried out to preserve the quality of fresh horticultural produce, further research—especially on safety—is still required. This book provides foundational insights into current practices yielding best results for produce handling.



Food Safety

A Roadmap to Success

Gary Ades G&L Consulting Group, LLC, Arkansas, USA
Ken Leith President and Managing Partner, e-Gauge, Inc., AR, USA
Patti Leith President and Managing Partner, EDGES, Inc., AR, USA

ISBN: 978-0-12-803104-9
PUB DATE: April 2016
FORMAT: Paperback
PAGES: c. 144

AUDIENCE

Food safety professionals and managers across the food supply chain business, corporate executives in the food industry

This helpful resource provides a practical, comprehensive roadmap for defining, developing, and implementing an effective food safety culture within an organization, and includes communication strategies, instructions for developing written guidelines, and specific recommendations for change management approaches to greatly reduce food safety risk

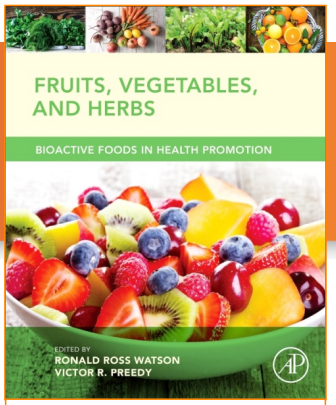
KEY FEATURES

- Provides practical information to help readers determine which culture they currently have and offers a framework to greatly reduce food safety risks
- Presents pertinent information in tables outlining differences in approach by size and food industry segment
- Includes solid recommendations and further resources applicable to all levels within an organization to ensure success
- Offers fundamental principles of change management through open communication, education, and measurement implementation

DESCRIPTION

Food Safety: A Roadmap to Success shows readers how to develop written guidelines for defining, developing, and implementing an effective food safety culture. It stresses the importance of having a consistent safety focus and utilizing an executable plan. The book provides means of developing commitment for transformation across the organization, and offers a comprehensive roadmap for creating productive changes that will reduce the potential for catastrophic consequences to your food business.

Additionally, it examines the potential effects of taking no action, as well as the benefits of putting in place a strategic, executable plan for change. *Food Safety: A Roadmap to Success* includes the implications of the various types of organizational structure regarding food safety and offers ways to move from the realities of today to a future that contains better efficiencies and greatly reduced food safety risk.



Fruits, Vegetables, and Herbs

Bioactive Foods in Health Promotion

Edited by: ***Ronald Watson*** Health Promotion Sciences Department, Mel and Enid Zuckerman College of Public Health, and School of Medicine, University of Arizona, Tucson, AZ, USA
Victor R. Preedy Department of Dietetics, King's College London, UK

This timely book offers a complete science-based appraisal of the efficacy of using fruits, vegetables, and herbs in health, nutrition, and disease prevention, containing valuable conclusions and recommendations helpful for further research into antioxidants, phytochemicals, and bioflavonoids—the bioactive components of fruits, vegetables, and herbs

ISBN: 978-0-12-802972-5
PUB DATE: April 2016
FORMAT: Hardback
PAGES: c. 596

AUDIENCE
nutrition researchers and food scientists, technologists, food processors and product developers, public health researchers

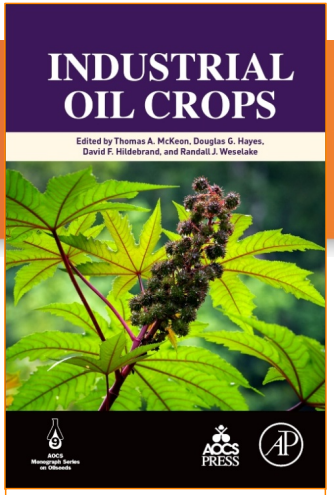
KEY FEATURES

- Provides insight on bioactive constituents found in fruits and vegetables that can be further studied to improve health and disease resistance or incorporated into other food products and used as alternative medicines and dietary supplements
- Includes valuable information on how fruits are important sources of bioflavonoids and non-nutritive bioactives that modify body functions
- Offers a conclusion or summary of evidence at the end of each chapter to enhance understanding of new approaches in the field

DESCRIPTION

Fruits, Vegetables, and Herbs: Bioactive Foods in Health Promotion brings together experts from around the world working on the cutting edge of research on fruit, vegetables, and herbs in health promotion. Offering a timely, concise, scientific appraisal of the efficacy of key foods to prevent disease and improve the quality of life, *Fruits, Vegetables, and Herbs: Bioactive Foods in Health Promotion* provides valuable evidence-based conclusions and recommendations.

This reference text will encourage further research on the potential benefits of fruits and vegetables in health and disease prevention, providing a basis for possible dietary modifications by the government and the public.



Industrial Oil Crops

Edited by: ***Thomas McKeon*** United States Department of Agriculture, Agricultural Research Service, Western Regional Research Center, Albany, California, USA
Doulgas Hayes Department of Biosystems Engineering and Soil Science, University of Tennessee, Knoxville, TN, USA
David Hildebrand Professor of Plant Biochemistry and Genetics, Department of Plant and Soil Sciences, University of Kentucky, Lexington, KY, USA
Randall Weselake Professor, Agricultural Biotechnology, Department of Agricultural, Food & Nutritional Science, University of Alberta, Edmonton, Canada

ELSEVIER

Explore the potential for using renewable sources for oil-based products

KEY FEATURES

- Up-to-date review of all the key oilseed crops used primarily for industrial purposes
- Highlights the potential for providing renewable resources to replace petroleum derived products
- Comprehensive chapters on biodiesel and polymer chemistry of seed oil
- Includes chapters on economics of new oilseed crops, emerging oilseed crops, genetic modification and plant tissue culture technology for oilseed improvement

DESCRIPTION

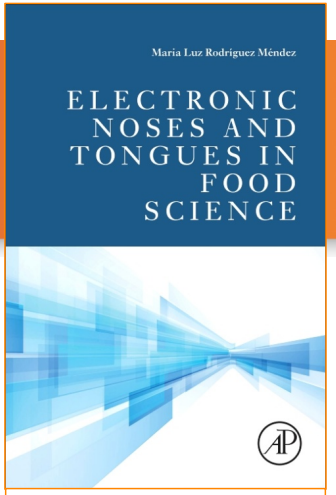
Industrial Oil Crops presents the latest information on important products derived from seed and other plant oils, their quality, the potential environmental benefit, and the latest trends in industrial uses. This book provides a comprehensive view of key oil crops that provide products used for fuel, surfactants, paints and coatings, lubricants, high-value polymers, safe plasticizers and numerous other products, all of which compete effectively with petroleum-derived products for quality and cost. Specific products derived from oil crops are a principle concern, and other fundamental aspects of developing oil crops for industrial uses are also covered. These include improvement through traditional breeding, and molecular, tissue culture and genetic engineering contributions to breeding, as well as practical aspects of what is needed to bring a new or altered crop to market. As such, this book provides a handbook for developing products from renewable resources that can replace those currently derived from petroleum. Led by an international team of expert editors, this book will be a valuable asset for those in product research and development as well as basic plant research related to oil crops.

ISBN: 978-1-893997-98-1
PUB DATE: March 2016
FORMAT: Hardback
PAGES: c. 442

AUDIENCE

Product developers, formulators, and analytical scientists in the fuels, biofuels, surfactants, paints and coatings, lubricants, polymers, and plastics industries

FOOD SCIENCE, TECHNOLOGY & NUTRITION
Please contact your Elsevier Sales or Customer Service Representative



Electronic Noses and Tongues in Food Science

Edited by: ***Maria Luz Rodriguez Mendez*** Professor and Chair of Inorganic Chemistry at the University of Valladolid, Spain
Victor R. Preedy Department of Dietetics, King's College London, UK

A thorough examination into the use of electronic noses and tongues - key tools used to gauge sensory properties, food quality and safety in a wide range of products

KEY FEATURES

- Presents latest developments in the application of electronic nose and tongue technologies to a variety of food-specific needs
- Includes both electronic nose, electronic tongue and combined technology insights
- Each chapter has sections on: The physical and chemical platforms; Analysis of specific foods; Applications to other foods and areas of food science

DESCRIPTION

Electronic Nose and Tongue in Food Science describes the electronic products of advanced chemical and physical sciences combined with intuitive integration of microprocessors, advanced bioinformatics and statistics. These include, for example, voltammetric, bio-electronic, piezoelectric platforms made from a variety of components including, nanoparticles, enzyme biosensors, heavy metals, graphite-epoxy composites, metal oxide semiconductors, microelectrodes, microfluidic channels, pre-manufactured gas sensors, redox enzymes and others and is an ideal resource for understanding and utilizing their power in Food Science settings.

Devices used to analyse one particular food item can theoretically be adapted for other food items or components. This does not just mean the re-deploying the physical platforms but also the mode of bioinformatic and statistical analysis. This includes artificial neural networks (ANN), linear discriminant analysis (LDA), partial least squares (PLS), principal component analysis (PCA) etc. In other words, there is cross transference of chemistry, physics, concepts, techniques, findings and approaches from one food to another. Electronic noses and tongues are two of these devices but are advancing in application and importance.

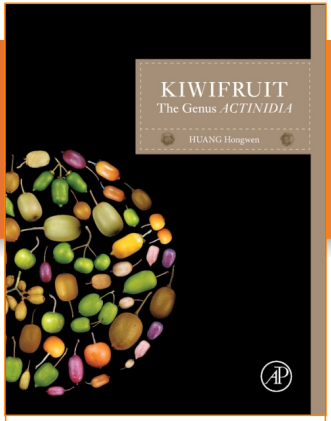
This book provides examples of the use of electronic noses and tongues to characterise components that contribute to sensory or compositional profiles, from ripening to harvesting and from storage of raw materials to packaging and consumption. These devises are suitable for high-throughput analysis, quality control or to determine the nature and extent of spoilage and adulteration, and have also been used to ascertain the geographical origins of food and mixtures.

ISBN: 978-0-12-800243-8
PUB DATE: March 2016
FORMAT: Hardback
PAGES: c. 340

AUDIENCE

Food scientists, technologists, food industry workers, as well as research scientists.

FOOD SCIENCE, TECHNOLOGY & NUTRITION
Please contact your Elsevier Sales or Customer Service Representative



Kiwifruit

The Genus ACTINIDIA

Hongwen Huang Professor, South China Botanical Garden, Chinese Academy of Sciences, China

The most authoritative reference book in English on the genus *Actinidia* (Kiwifruit)

KEY FEATURES

- The first world monograph on the genus *Actinidia* (kiwifruit)
- Presents up-to-date research based content on "everything kiwi", including new and critical information about kiwi germplasm and taxonomy from China, the native country of kiwi
- Provides authoritative and detailed descriptions for each species with extensive color illustrations and information accumulated from author's 30 years research

DESCRIPTION

Kiwifruit: The Genus Actindia includes extensive and full coverage of scientific and applied information ranging from basic taxonomy, population genetics, and natural resources/distribution to domestication history and breeding/cultivars, and to culture and international production and commercialization.

Kiwifruit: The Genus Actindia gathers information not previously available in the English language providing an authoritative reference for professionals, including taxonomists, horticulturist, breeders, conservationist and kiwifruit technicians and extension specialists and college teachers, as well as policy makers of industry and governments. In addition to those in the academic and professional sectors, horticultural and botanical enthusiasts will find the information presented highly accessible.

ISBN: 978-0-12-803066-0

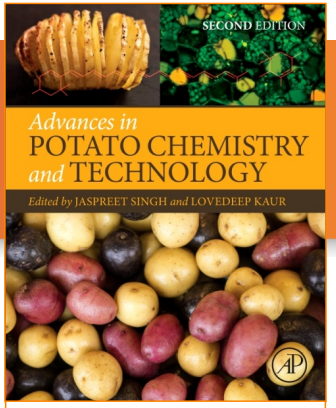
PUB DATE: March 2016

FORMAT: Hardback

PAGES: c. 334

AUDIENCE

Botanists, horticulturists, taxonomists, plant breeders, conservationists and kiwifruit technicians & extension specialists, college teachers & students in botany and horticulture related majors. This book also can be used as a reference for Kiwifruit growers, gardeners, and horticultural and botanical enthusiasts.



Advances in Potato Chemistry and Technology, 2e

Edited by: ***Jaspreet Singh*** Riddet Institute, Massey University, New Zealand
Lovedeep Kaur Riddet Institute, Massey University, New Zealand

Shape future research with updated, new knowledge on the chemistry, nutrition, and technology of potatoes that includes discussions on the identification, analysis, and use of chemical components of potatoes, carbohydrate and non-carbohydrate composition, cell wall chemistry, and an analysis of glycoalkaloids, phenolics and anthocyanins, amongst others

ISBN: 978-0-12-800002-1

PREVIOUS EDITION ISBN: 9780123743497

PUB DATE: February 2016

FORMAT: Hardback

PAGES: c. 738

AUDIENCE

Food scientists, food chemists, nutritionists, upper-level undergraduate and graduate students and food-industry professionals working with potatoes

KEY FEATURES

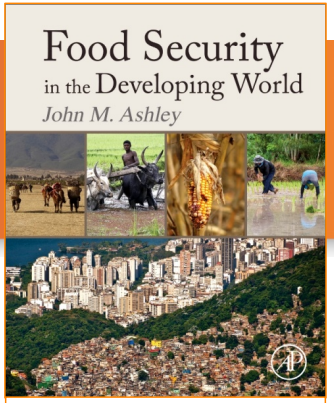
- Includes both the emerging non-food uses of potato and potato-by-products as well as the expanding knowledge on the food-focused use of potatoes
- Presents case studies on the problems, factors, proposed solutions, and pros and cons of each, allowing readers facing similar concerns and issues to effectively and efficiently identify an appropriate solution
- Written by a global collection of experts in both food and non-food potato science

DESCRIPTION

Advances in Potato Chemistry and Technology, Second Edition, presents the latest knowledge on potato chemistry, including the identification, analysis, and uses of chemical components in potatoes. Beginning with a brief description of potato components, the book then delves into their role during processing, then presenting information on strategies for quality optimization that provides students, researchers, and technologists working in the area of food science with recent information and updates on state-of-the-art technologies.

The updated edition includes the latest information related to the identification, analysis, and use of chemical components of potatoes, carbohydrate and non-carbohydrate composition, cell wall chemistry, an analysis of glycoalkaloids, phenolics and anthocyanins, thermal processing, and quality optimization.

In addition, new and sophisticated methods of quality determination of potatoes and their products, innovative and healthy potato-based foods, the future of genetically modified potatoes, and the non-food use of potatoes and their products is discussed.



Food Security in the Developing World

John Michael Ashley Senior International Consultant, Geopolicity Inc., Dubai, U.A.E

Build successful plans to ensure food security by understanding the underlying concerns and causes

ISBN: 978-0-12-801594-0

PUB DATE: February 2016

FORMAT: Paperback

PAGES: c. 210

AUDIENCE

For University undergraduate/ diploma/ vocational/ adult education students and teachers; developing country government agricultural/ rural development/ planning ministries and departments; extension workers and NGOs; UN and other international organisations; bilateral and multilateral donor partners and development banks

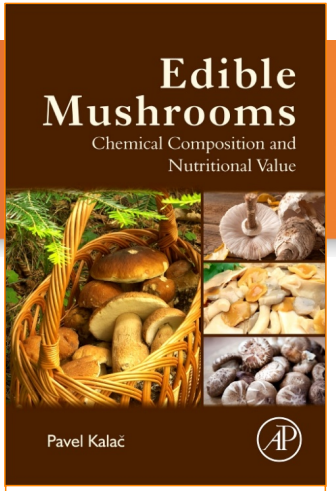
KEY FEATURES

- Presents all aspects of food security in a logical sequence
- Covers the manifestation and measurement of food insecurity
- Includes case studies and cross-cutting multidisciplinary issues

DESCRIPTION

Food Security in the Developing World provides an entry point into the complex and challenging subject of providing access to nutritious and safe food in a readable format, capturing the essence of the subject in an effective and impactful manner. Organized into nine chapters the book covers the manifestation and measurement of food insecurity; means whereby households endeavour to be food-secure; causes of food insecurity; mitigation of current food insecurity and prevention of future food insecurity. There will then follow a chapter with case studies, a chapter on cross-cutting issues and the final chapter drawing conclusions and recommendations on the way forward to increase the prevalence of food security in developing countries. A glossary and Bibliography will round off the book.

Dr. Ashley's real-world experience makes the book accessible while providing valuable insights into the broad range of factors that contribute to food insecurity in this large at-risk population, and practical means of addressing them.



Edible Mushrooms

Chemical Composition and Nutritional Value

Pavel Kalac Professor of Agricultural Chemistry, Department of Applied Chemistry, University of South Bohemia, Czech Republic

The ultimate book compendium gathering all the information related to edible mushrooms: bioactive compounds, chemical composition and nutritional aspects

ISBN: 978-0-12-804455-1

PUB DATE: February 2016

FORMAT: Paperback

PAGES: c. 216

AUDIENCE

Food producers, processors and merchants of cultivated mushrooms; food chemists; nutritionists; mycologists.

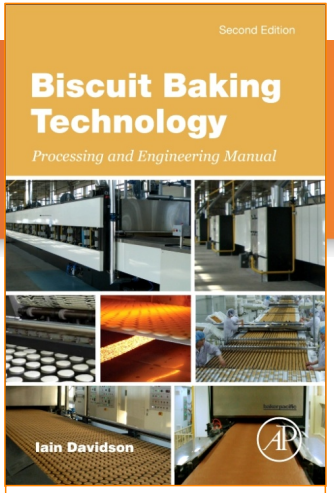
KEY FEATURES

- Thoroughly explores the chemical composition and nutritional value of both cultivated and wild growing mushroom species.
- Gathers all the information available on mushroom compounds in order providing an easy comparison of nutritional properties and bioactive compounds.
- Includes hundreds of current references allowing you to further your exploration of the topic by reviewing the detailed data in the primary literature.

DESCRIPTION

Edible Mushrooms provides an advanced overview of the chemical composition and nutritional properties of nearly all species of culinary mushrooms. This unique compendium gathers all current literature, which has beendispersed as fragmentary information until now.

The book is broken into five parts covering chemical and nutrient composition, taste and flavor components as well as health stimulating and potentially detrimental effects. Appendices provide helpful quick references on abbreviations, common names of mushrooms, fatty acid profiles, and an index of mushroom species. Mycologists, nutrition researchers, mushroom cultivators and distributors, and food and neutraceutical processors will benefit from this sweeping overview of edible mushrooms.



Biscuit Baking Technology, 2e

Processing and Engineering Manual

Iain Davidson Director, Baker Pacific Ltd.

A manual for designers and operators on the biscuit oven-baking technology

ISBN: 978-0-12-804211-3

PUB DATE: January 2016

FORMAT: Paperback

PAGES: c. 334

AUDIENCE

Senior managers and staff in industrial biscuit manufacturers (production, engineering and purchasing departments). Baking industry and institutions in general.

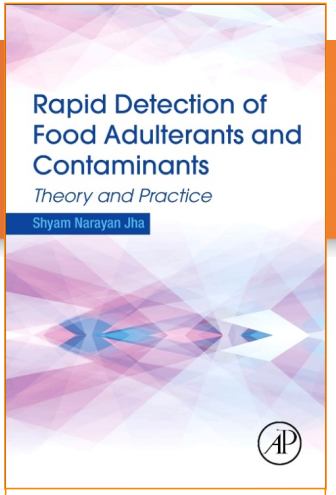
KEY FEATURES

- Thoroughly explores the engineering of baking, details biscuit baking equipments, oven specifications, installation, operation and maintenance;
- The second edition expands chapters 1 to 3, detailing basic biscuit process, product range, ingredients and process changes during baking. All the chapters have been reorganized and updated;
- Provides details of best industry practice for safety, hygiene and maintenance of ovens;
- Contains explanations of heat transfer and all the types of biscuit oven design with clear pictures and drawings;
- Gathers all the information on how to select and specify an oven to be purchased for a particular range of biscuits.

DESCRIPTION

Biscuit Baking Technology, Second Edition, is a reference book for senior managers and staff involved in industrial scale biscuit baking. It covers the biscuit industry process, ingredients, formulations, besides design, manufacture, installation, operation and maintenance of the baking ovens.

Written by an expert on the biscuit baking industry, the book is a complete manual guide that will help engineering, production and purchasing managers and staff in the biscuit industry to make the best decisions on oven efficiency purchasing.



Rapid Detection of Food Adulterants and Contaminants

Theory and Practice

Shyam Narayan Jha Project Coordinator, Central Institute of Post-Harvest Engineering & Technology, Ludhiana, India

As a quick reference for the basic understanding of government standards and practices regarding the detection of food adulterants and contaminants, this comprehensive book provides an overview of the latest detection methods, helping users gain an understanding of how these methods aid in ensuring food quality and safety

ISBN: 978-0-12-420084-5

PUB DATE: January 2016

FORMAT: Hardback

PAGES: c. 266

AUDIENCE

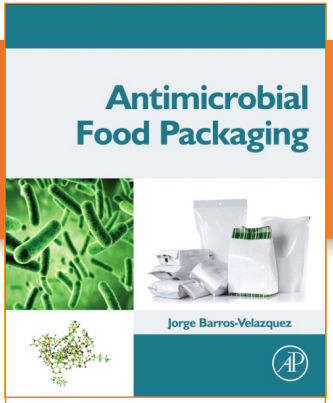
Researchers and students in food science & technology, food engineering, and food microbiology

KEY FEATURES

- Reviews the most common detection methods of food adulterants and contaminants
- Includes supporting theory behind the latest techniques
- Presents case studies to better understand practical applications and resources for further research
- Addresses the safety standards of a variety of governments and serves as a reference for why government procedures are put in place

DESCRIPTION

Rapid Detection of Food Adulterants and Contaminants: Theory and Practice contains solid information on common adulterants and contaminants in various foods, guidelines for different standards, permissible limits prescribed by food regulatory authorities, and related detection techniques. This is an essential reference for anyone interested in progressive research on detection methods for food safety, especially researchers engaged in developing fast, reliable, and often nondestructive methods for the evaluation of food safety.



Antimicrobial Food Packaging

Edited by: ***Jorge Barros-Velazquez*** College of Pharmacy/School of Veterinary Sciences, University of Santiago de Compostela, Spain

This practical reference provides basic information and practical applications for the potential uses of various films in food packaging, and also describes the different types of microbial targets (fungal, bacteria, etc.) and the applicability of techniques to industry

ISBN: 978-0-12-800723-5

PUB DATE: January 2016

FORMAT: Hardback

PAGES: c. 654

AUDIENCE

Professionals in food packaging, food technology, food safety, food scientists and technologists; microbiologists; chemists

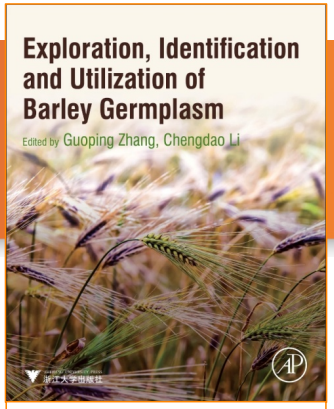
KEY FEATURES

- Presents the science behind anti-microbial packaging and films reflecting advancements in chemistry, microbiology, and food science
- Includes the most up-to-date information on regulatory aspects, consumer acceptance, research trends, cost analysis, risk analysis and quality control
- Discusses the uses of natural and unnatural compounds for food safety and defense

DESCRIPTION

Antimicrobial Food Packaging takes an interdisciplinary approach to provide a complete and robust understanding of packaging from some of the most well-known international experts. This practical reference provides basic information and practical applications for the potential uses of various films in food packaging, describes the different types of microbial targets (fungal, bacteria, etc.), and focuses on the applicability of techniques to industry.

Tactics on the monitoring of microbial activity that use antimicrobial packaging detection of food borne pathogens, the use of biosensors, and testing antimicrobial susceptibility are also included, along with food safety and good manufacturing practices. The book aims to curtail the development of microbiological contamination of food through anti-microbial packaging to improve the safety in the food supply chain.



Exploration, Identification and Utilization of Barley Germplasm

Guoping Zhang Professor, Zhejiang University, Hangzhou, China
Chengdao Li Barley Breeder and Molecular Geneticist, Department of Agriculture and Food, Perth, West Australia; Guest professor of Zhejiang University, Hangzhou, China

Learn newly-developed methodologies in barley germplasm research and information on the special genotypes or relevant genes associated with quality and abiotic stress tolerance

ISBN: 978-0-12-802922-0
PUB DATE: December 2015
FORMAT: Hardback
PAGES: c. 290

AUDIENCE

Professional scientists, technicians and students who are engaged in crop genetics and breeding. Agronomists, plant geneticists and plant breeding professionals, crop and plant physiologists can use this book as a reference work.

KEY FEATURES

- Provides a one-stop shop to acquire a speedy overview of the main and recently applied issues of barley breeding
- Provides newly-developed methodologies in barley germplasm research
- Describes special genotypes from wild barley, including Tibetan wild barley, which show a high tolerance to abiotic stresses and carry different alleles from cultivated barley

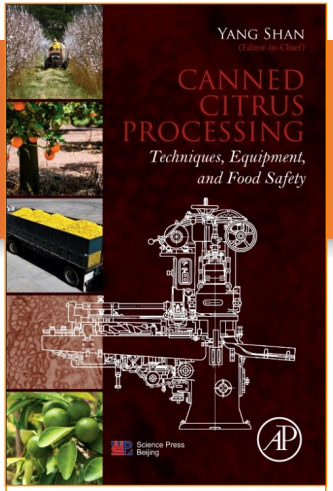
DESCRIPTION

Exploration, Identification and Utilization of Barley Germplasm explores the timely global challenges related to barley production posed by the narrowing of biodiversity and problem soils, identifying elite genotypes which will enhance barley breeding and be essential to genetic and evolution studies.

The book covers the utilization of barley germplasm for improving the quality of both food and feed barley as well as exploring and utilizing varieties of germplasm that are tolerant to drought, waterlogged, salt, and acid soil. Chapters are devoted to prime strategies for future research, including identifying barley germplasm by applying Omics, exploring barley germplasm by means of the Focused Identification of Germplasm Strategy (FIGS), and creating barley germplasm through mutation.

Users will find this book to be a key research reference for both professionals and academics, providing a comprehensive update for established barley researchers that equips them with an understanding of the new methodologies needed for innovation and discovery, while also providing a helpful entry to the subject for young researchers and students.

FOOD SCIENCE, TECHNOLOGY & NUTRITION
Please contact your Elsevier Sales or Customer Service Representative



Canned Citrus Processing

Techniques, Equipment, and Food Safety

Edited by: ***Yang Shan*** Professor and Vice-president, Hunan Academy of Agricultural Sciences, Beijing, China

Gain the latest knowledge of the methods and equipment in the canned citrus processing industry, as well as food safety control standards

ISBN: 978-0-12-804701-9

PUB DATE: December 2015

FORMAT: Paperback

PAGES: c. 182

AUDIENCE

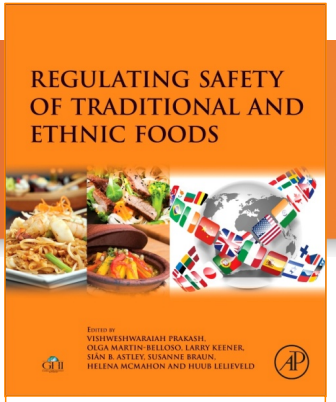
Scientists, scholars, and students working or studying citrus; citrus processing enterprises; dietitians and nutritionists; farmers from cooperative organizations related to citrus processing.

KEY FEATURES

- Presents an overview of the canned citrus industry.
- Introduces advanced processing methods, machinery and equipment of canned citrus.
- Discusses processing quality and safety control, corresponding domestic and international standards in the canned citrus industry.

DESCRIPTION

Citrus is one of the most popular fruits around the world, and can be successfully cultivated in more than 140 countries. Producing 75% of citrus consumed in the global market, China has become the new “Kingdom of Canned Citrus”. *Canned Citrus Processing: Techniques, Equipment, and Food Safety* comprehensively presents the technical and development trends of the canned citrus industry. This book provides solutions to typical problems of canned citrus manufacturing and processing; presents an overview of the canned citrus industry, introduces canned citrus processing machinery and equipment, and discusses the processing quality, safety control, and related standards.



Regulating Safety of Traditional and Ethnic Foods

Edited by: ***V. Prakash*** Distinguished Scientist of CSIR, India; ***Olga Martin-Belloso*** Professor of Food Science and Technology, University of Lleida, Spain, and Head research unit Novel Technologies for Food Processing.; ***Larry Keener*** GHI Association, Wien, Austria; ***Sian Bethan Astley*** Training and Communications Manager, EuroFIR AISBL; ***Susanne Braun*** GHI Association, Wien, Austria; ***Helena McMahon*** Principle Investigator, Shannon Applied Biotechnology Center, Institute of Technology Tralee, Co Kerry, Ireland; ***Huub Lelieveld*** formerly Unilever, Vlaardingen, The Netherlands

This book examines a variety of traditional foods from around the world, their risks and benefits, and how regulatory steps may assist in establishing safe parameters for these foods without reducing their cultural or nutritive value in today's diets

ISBN: 978-0-12-800605-4

PUB DATE: November 2015

FORMAT: Hardback

PAGES: c. 514

AUDIENCE

University professors and students, Food companies (producers and traders), NGO's, Researchers interested in food biochemistry, Regulators, and in particular those who export or import EF and TF

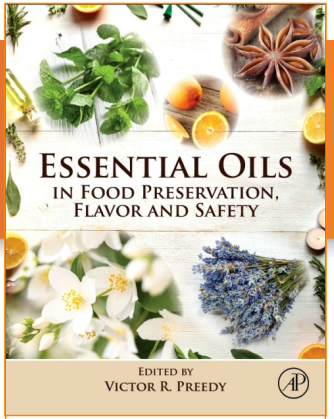
KEY FEATURES

- Addresses the need for balance in safety regulation and retaining traditional food options
- Includes case studies from around the world to provide practical insight and guidance
- Presents suggestions for developing appropriate global safety standards

DESCRIPTION

Regulating Safety of Traditional and Ethnic Foods, a compilation from a team of experts in food safety, nutrition, and regulatory affairs, examines a variety of traditional foods from around the world, their risks and benefits, and how regulatory steps may assist in establishing safe parameters for these foods without reducing their cultural or nutritive value.

Many traditional foods provide excellent nutrition from sustainable resources, with some containing nutraceutical properties that make them not only a source of cultural and traditional value, but also valuable options for addressing the growing need for food resources. This book discusses these ideas and concepts in a comprehensive and scientific manner.



Essential Oils in Food Preservation, Flavor and Safety

Edited by: ***Victor Preedy*** Department of Dietetics, King's College London, UK

This book provides the only single-volume resource to address the broad range of food industry uses of essential oils, including information on many of the complex features of the essential oils as they are applied to food science, ranging from production and harvesting, to the anti-spoilage properties of individual components.

ISBN: 978-0-12-416641-7

PUB DATE: December 2015

FORMAT: Hardback

PAGES: c. 896

AUDIENCE

Flavor and sensory scientists, those involved in packaging development and food safety. New product developers

KEY FEATURES

- Explains how essential oils can be used to improve safety, flavor, and function
- Embraces a holistic approach to the topic, and is divided into two distinct parts, the general aspects and named essential oils
- Provides exceptional range of information, from general use insights to specific use and application information, along with geographically specific information
- Examines traditional and evidence-based uses
- Includes methods and examples of investigation and application

DESCRIPTION

Essential Oils in Food Preservation, Flavor and Safety discusses the major advances in the understanding of the Essential Oils and their application, providing a resource that takes into account the fact that there is little attention paid to the scientific basis or toxicity of these oils.

This book provides an authoritative synopsis of many of the complex features of the essential oils as applied to food science, ranging from production and harvesting, to the anti-spoilage properties of individual components. It embraces a holistic approach to the topic, and is divided into two distinct parts, the general aspects and named essential oils.

With more than 100 chapters in parts two and three, users will find valuable sections on botanical aspects, usage and applications, and a section on applications in food science that emphasizes the fact that essential oils are frequently used to impart flavor and aroma. However, more recently, their use as anti-spoilage agents has been extensively researched.

Food Fraud

John M. Ryan Ryan Systems, Inc. Palm Bay, FL, USA

This book provides practical information on food fraud, including the complex issues that increasing international food trade presents, especially in countries that have inadequate oversight or control over the products that are eventually ending up in supermarkets, restaurants, and refrigerators around the world

ISBN: 978-0-12-803393-7

PUB DATE: November 2015

FORMAT: Paperback

PAGES: c. 92

AUDIENCE

Food shippers, processors, retail and restaurant purchasing groups, ingredient buyers and sellers, food safety managers and team members

KEY FEATURES

- Includes new FDA rules based on the Food Safety Modernization Act (FSMA) regarding "intentional adulteration" and "economically motivated adulteration"
- Presents a review of the latest food detection testing technologies
- Provides examples of import controls over illegal replacements

DESCRIPTION

Food Fraud provides an overview of the current state on the topic to help readers understand which products are being impacted, how pervasive food fraud is, and what laws are in effect across the developed world. As international food trade increases, food processors, distributors, and consumers are purchasing more and more food from foreign countries that, in many cases, have inadequate oversight or control over what is coming into our supermarkets, restaurants, and refrigerators. This book is an essential quick reference that will familiarize readers with the latest issues surrounding the food industry.

Mushroom Biotechnology

Developments and Applications

Marian Petre Research Professor Ph.D. Habil.,University of Pitesti, Faculty of Science, Bucharest, ROMANIA

Provides biological tools for the cultivation of mushrooms for the agriculture and food industries

ISBN: 978-0-12-802794-3

PUB DATE: October 2015

FORMAT: Paperback

PAGES: c. 226

AUDIENCE

Scientists and researchers and students in agriculture and food engineering; mushroom bioengineering; biotechnology; mycology, biochemistry; sustainability

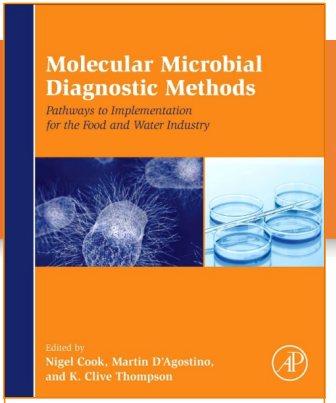
KEY FEATURES

- Includes both theoretical and practical tools to apply mushroom biotechnology to further research and improve value added products
- Presents innovative biotechnological procedures applied for growing and developing many species of edible and medicinal mushrooms by using high-tech devices
- Reveals the newest applications of mushroom biotechnology to produce organic food and therapeutic products, to biologically control the pathogens of agricultural crops, and to remove or mitigate the harmful consequences of quantitative expansion and qualitative diversification of hazardous contaminants in natural environment

DESCRIPTION

Mushroom Biotechnology: Developments and Applications is a comprehensive book to provide a better understanding of the main interactions between biological, chemical and physical factors directly involved in biotechnological procedures of using mushrooms as bioremediation tools, high nutritive food sources, and as biological helpers in healing serious diseases of the human body.

The book points out the latest research results and original approaches to the use of edible and medicinal mushrooms as efficient bio-instruments to reduce the environment and food crises. This is a valuable scientific resource to any researcher, professional, and student interested in the fields of mushroom biotechnology, bioengineering, bioremediation, biochemistry, eco-toxicology, environmental engineering, food engineering, mycology, pharmacists, and more.



Molecular Microbial Diagnostic Methods

Pathways to Implementation for the Food and Water Industries

Edited by: ***Nigel Cook*** Research Scientist, Fera Science Ltd., York, United Kingdom
Martin D'Agostino Microbiologist, Fera Science Ltd., York, United Kingdom
K. Clive Thompson Chief Scientist, ALcontrol Laboratories, South Yorkshire, United Kingdom

ISBN: 978-0-12-416999-9
PUB DATE: October 2015
FORMAT: Hardback
PAGES: c. 248

AUDIENCE

Laboratory managers; senior microbiologists in routine food and water microbiological laboratories

This book is intended to address the shortage of guidance on implementation of molecular-based methods for routine diagnostic laboratories. There has been a large number of "leading edge" potential techniques (mainly involving molecular biology) developed recently, many of which have a high potential for implementation, but this potential is not being fulfilled. Molecular Microbial Diagnostic Methods: Pathways to Implementation in the Food and Water Industries will bring clarification and encourage progress towards implementation of robust and sustainable molecular-based methods for food and water, with emphasis on microbial detection and identification.

KEY FEATURES

- Includes information on how to introduce and implement molecular methods for routine monitoring in food and water laboratories
- Discusses the importance of robust validation of molecular methods as alternatives to existing standard methods to help ensure the production of defendable results
- Highlights potential issues with respect to successful implementation of these methods

DESCRIPTION

Molecular Microbial Diagnostic Methods: Pathways to Implementation for the Food and Water Industry was developed by recognized and experienced highlevel scientists. It's a comprehensive and detailed reference that uncovers industry needs for the use of molecular methods by providing a brief history of water and food analysis for the pathogens of concern. It also describes the potential impact of current and cutting-edge molecular methods. This book discusses the advantages of the implementation of molecular methods, describes information on when and how to use specific methods, and presents why one should utilize them for pathogen detection in the routine laboratory. The content is also pertinent for anyone carrying out microbiological analysis at the research level, and for scientists developing methods, as it focuses on the requirements of end-users.

Statistics for Food Scientists

Making Sense of the Numbers

Frank Rossi Frank Rossi, Kraft Foods Group, Illinois, USA
Victor Mirtchev Viktor Mirtchev, Kraft Foods Group, Illinois, USA

This book helps readers understand the approaches used by statisticians as they strive to make intelligent and accurate statements about a population from a limited sample, seek to reduce the risk of being seriously mislead about important on-the-job decisions, and try to make data driven decisions that will ultimately lead to stronger predictions for product performance.

ISBN: 978-0-12-417179-4

PUB DATE: October 2015

FORMAT: Paperback

PAGES: c. 176

AUDIENCE

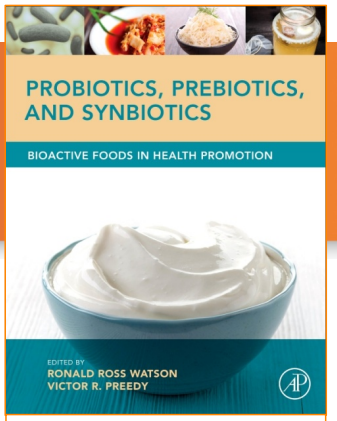
Their roles in Product Development, Product Quality, Manufacturing, Regulatory and Quality Assurance and their industry titles include Food Scientist, Food Engineer, Quality Manager and Product Developer.

KEY FEATURES

- Presents detailed descriptions of statistical concepts and commonly used statistical tools to better analyze data and interpret results
- Demonstrates thorough examples and specific practical problems of what food scientists face in their work and how the tools of statistics can help them to make more informed decisions
- Provides information to show how statistical tools are applied to improve research results, enhance product quality, and promote overall product development

DESCRIPTION

The practical approached championed in this book have led to increasing the quality on many successful products through providing a better understanding of consumer needs, current product and process performance and a desired future state. In 2009, Frank Rossi and Viktor Mirtchev brought their practical statistical thinking forward and created the course “Statistics for Food Scientists”. The intent of the course was to help product and process developers increase the probability of their project’s success through the incorporation of practical statistical thinking in their challenges. The course has since grown and has become the basis of this book.



Probiotics, Prebiotics, and Synbiotics

Bioactive Foods in Health Promotion

Edited by: ***Ronald Ross Watson*** Health Promotion Sciences Department, Mel and Enid Zuckerman College of Public Health, and School of Medicine, University of Arizona, Tucson, AZ, USA
Victor R. Preedy Department of Dietetics, King's College London, UK

An evidence-based overview of probiotics and prebiotics including timely coverage of the emerging field of synbiotics

ISBN: 978-0-12-802189-7
PUB DATE: October 2015
FORMAT: Hardback
PAGES: c. 908

AUDIENCE

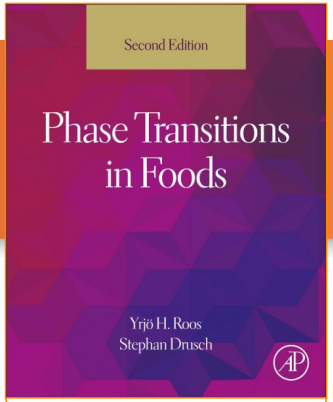
food scientists/ technologists, nutraceutical/supplement product developers. Libraries for researchers, graduate students and fellows in Food Science, Microbiology, Dairy Science, Health, and Nutrition

KEY FEATURES

- Offers a novel focus on synbiotics, carefully designed prebiotics probiotics combinations to help design functional food and nutraceutical products
- Discusses how prebiotics and probiotics are complementary and can be incorporated into food products and used as alternative medicines
- Defines the variety of applications of probiotics in health and disease resistance and provides key insights into how gut flora are modified by specific food materials
- Includes valuable information on how prebiotics are important sources of micro-and macronutrients that modify body functions

DESCRIPTION

Probiotics, Prebiotics, and Synbiotics: Bioactive Foods in Health Promotion reviews and presents new hypotheses and conclusions on the effects of different bioactive components of probiotics, prebiotics, and synbiotics to prevent disease and improve the health of various populations. Experts define and support the actions of bacteria; bacteria modified bioflavonoids and prebiotic fibrous materials and vegetable compounds. A major emphasis is placed on the health-promoting activities and bioactive components of probiotic bacteria.



Phase Transitions in Foods, 2e

Yrjo H Roos Professor of Food Technology and Head of the School of Food and Nutritional Sciences at University College, Cork, Ireland
Stephan Drusch Head of the Department of Food Technology and Food Material Science at Technische Universität Berlin, Germany

The most recent research and theories on phase transitions in foods, covering the role of water as a plasticizer and other key topics

ISBN: 978-0-12-408086-7
PREVIOUS EDITION ISBN: 978-0-12-595340-5
PUB DATE: October 2015
FORMAT: Hardback
PAGES: c. 368

AUDIENCE
Industrial researchers directly involved with food processing and product development, food science researchers and food science students (food engineering and food chemistry). Also of interest to agricultural and chemical engineers.

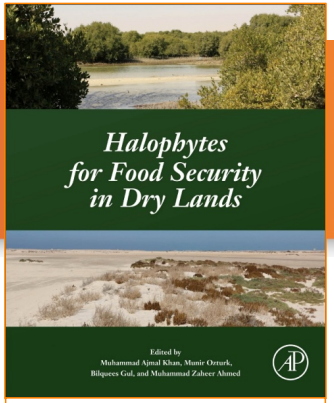
"Collates a wealth of information that constitutes a reference source not only for food technologists and engineers but also, and perhaps more importantly, for proteins chemists, microbiologists, enzymologists, and the like, although they may not realize it without a careful reading...The book is the first to draw together salient information on phase and state transitions and the consequences of those transitions on the mechanical and physicochemical properties of foods, polymers, and some biological materials. As such, the book will become an essential reference text."
--Malcolm Potts, Virginia Polytechnic Institute and State University in JOURNAL OF FOOD COMPOSITION AND ANALYSIS

KEY FEATURES

- Contains descriptions of non-fat food solids as "biopolymers" which exhibit physical properties that are highly dependent on temperature, time, and water content
- Details the effects of water on the state and stability of foods
- Includes information on changes occurring in state and physicochemical properties during processing and storage
- The only book on phase and state transitions written specifically for the applications in food industry, product development, and research

DESCRIPTION
Phase Transitions in Foods, Second Edition, assembles the most recent research and theories on the topic, describing the phase and state transitions that affect technological properties of biological materials occurring in food processing and storage. It covers the role of water as a plasticizer, the effect of transitions on mechanical and chemical changes, and the application of modeling in predicting stability rates of change.

The volume presents methods for detecting changes in the physical state and various techniques used to analyze phase behavior of biopolymers and food components. It should become a valuable resource for anyone involved with food engineering, processing, storage, and quality, as well as those working on related properties of pharmaceuticals and other biopolymers.



Halophytes for Food Security in Dry Lands

Muhammad Ajmal Khan Qatar University, Qatar
Munir Ozturk Ege University, Turkey
Bilquees Gul University of Karachi, Pakistan
Muhammad Zaheer Ahmed University of Karachi, Pakistan

This book discusses the use of saline agriculture as a solution to food security, especially focusing on the regions of the world where climates are arid and extremely dry

ISBN: 978-0-12-801854-5
PUB DATE: September 2015
FORMAT: Paperback
PAGES: c. 338

AUDIENCE

Researchers, professionals and students in agriculture, ecology and ecosystem functioning, botany, landscape planning, hydrology, and geomorphology

KEY FEATURES

- Provides comprehensive coverage of the importance and utilization of halophytes to compensate the demand of food in whole world especially in the dry regions
- Contains insights from ecological to molecular fields
- Includes edible halophytes as well as those that enhance food-producing eco-systems
- Presents information for improving abiotic stress tolerance in plants

DESCRIPTION

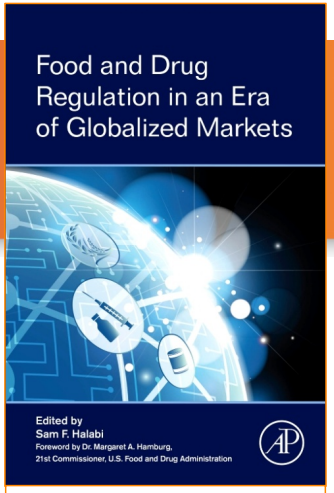
Halophytes for Food Security in Dry Lands addresses the concerns surrounding global food scarcity, especially focusing on those living in arid and dry lands

The book touches on food crises in dry regions of the world and proposes halophytes as an alternate source of consumption for such areas. Halophytes, those plants that thrive in saline soil and provide either food source options themselves, or positively enhance an eco-system's ability to produce food, and are thus an important and increasingly recognized option for addressing the needs of the nearly 1/6 of the world's population that lives in these arid and semi-arid climates.

Including presentations from the 2014 International Conference on Halophytes for Food Security in Dry Lands, this book features insights from the leading researchers in the subject. It is a valuable resource that includes information on the nutritional value of halophytes, their genetic basis and potential enhancement, adaption of halophytes, and lessons learned thus far.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Food and Drug Regulation in an Era of Globalized Markets

Edited by: ***Sam F Halabi*** The University of Tulsa College of Law, Tulsa, OK, USA

A synthesized look at the pressures that are impacting today's food and drug markets and global initiatives

ISBN: 978-0-12-802311-2

PUB DATE: September 2015

FORMAT: Paperback

PAGES: c. 220

AUDIENCE

Academics and regulators from a wide range of low-, middle-, and high-income countries; legal professionals who mainly work in the food and drug regulatory space for North American and European firms who are increasingly accessing low- and middle-income markets for a number of reasons; and managers in major food and drug firms seeking to understand the next set of regulatory challenges

KEY FEATURES

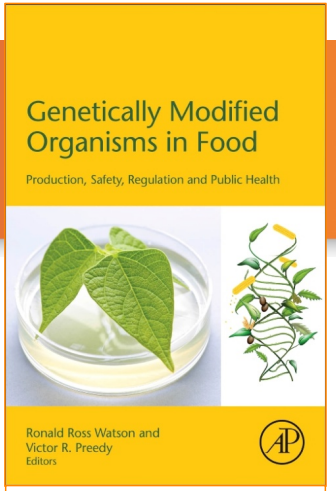
- Interdisciplinary approach allows readers to understand the varying perspectives involved in regulatory development
- Includes case studies to highlight harmonization efforts and challenges, and to provide practical insights for application going forward
- Provides a thorough assessment of supply chains, potential gaps, and means of anticipating and addressing issues
- Presents a comprehensive snapshot of changes in the food safety law in the United States and under international standards, including academic, industry and regulatory perspectives
- Addresses conflicts and cooperation between relevant US agencies including USDA, FDA, DEA, EPA, FTC and the Department of Commerce

DESCRIPTION

Food and Drug Regulation in an Era of Globalized Markets provides a synthesized look at the pressures that are impacting today's markets, including trade liberalization, harmonization initiatives between governments, increased aid activities to low-and middle-income countries, and developing pharmaceutical sectors in China and India.

From the changing nature of packaged and processed food supply chains, to the reorientation of pharmaceutical research and funding coalesced to confront firms, regulators, and consumers are now faced with previously unknown challenges.

Based on the 2014 O'Neill Institute Summer program, this book provides an international, cross-disciplinary look at the changing world of regulations and offers insights into requirements for successful implementation.



Genetically Modified Organisms in Food

Production, Safety, Regulation and Public Health

Ronald Ross Watson Health Promotion Sciences Department, Mel and Enid Zuckerman College of Public Health, and School of Medicine, University of Arizona, Tucson, AZ, USA
Victor R. Preedy Department of Dietetics, King's College London, UK

A practical scientific approach for food industry professionals to make informed decisions about risks and benefits of GMOs in the food supply

ISBN: 978-0-12-802259-7
PUB DATE: August 2015
FORMAT: Hardback
PAGES: c. 494

AUDIENCE

Food safety professionals; Food scientists; R&D, Government officials and policy makers; Researcher and professionals in food, agriculture, and food quality; Students and Professors

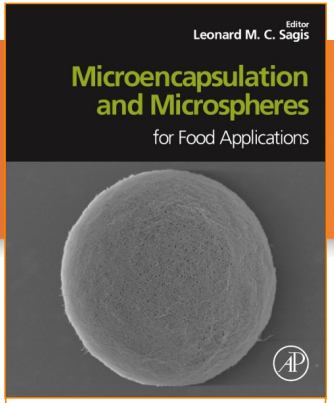
KEY FEATURES

- Provides the latest on research and development in the field of GMOs and non-GMO safety issues and possible risk factors incorporating evidence based reviews for a better understanding of these issues
- Covers various aspects of GMO production, analysis and identification to better understand GMO development and use
- Includes definitions, a brief overview and history of GM foods from a global perspective and concise summaries with recommendations for actions for each chapter

DESCRIPTION

Genetically Modified Organisms in Food focuses on scientific evaluation of published research relating to GMO food products to assert their safety as well as potential health risks. This book is a solid reference for researchers and professionals needing information on the safety of GMO and non-GMO food production, the economic benefits of both GMO and non-GMO foods, and includes in-depth coverage of the surrounding issues of genetic engineering in foods. This is a timely publication written by a team of scientific experts in the field who present research results to help further more evidence based research to educate scientists, academics, government professionals about the safety of the global food supply.

FOOD SCIENCE, TECHNOLOGY & NUTRITION
Please contact your Elsevier Sales or Customer Service Representative



Microencapsulation and Microspheres for Food Applications

Edited by: ***Leonard M.C. Sagis*** Wageningen University, Food Physics Group, WG Wageningen, The Netherlands

This book provides a solid update on the latest developments, challenges, and opportunities in the highly expanding field of microencapsulation and microspheres for food applications, examining the various types of microspheres and microcapsules essential to those who need to develop stable and impermeable products at high acidic conditions.

ISBN: 978-0-12-800350-3

PUB DATE: August 2015

FORMAT: Hardback

PAGES: c. 420

AUDIENCE

Food Engineers and Bioengineers; Researchers and Professionals in microencapsulation industries and food biochemistry; grad students

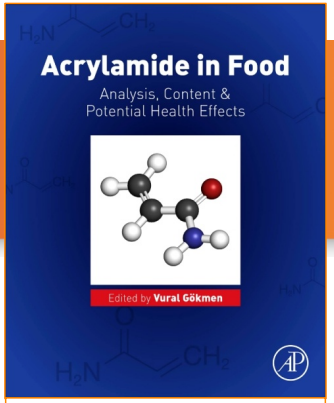
KEY FEATURES

- Discusses the most current encapsulation technology applied in the food industry, including radiography, computed tomography, magnetic resonance imaging, and dynamic NMR microscopy
- Presents the use of microsphere immunoassay for mycotoxins detection
- Covers a broad range of applications of microcapsules and microspheres, including food shelf-life, pesticides for crop protection, and nanoencapsulated bacteriophage for food safety

DESCRIPTION

Microencapsulation and Microspheres for Food Applications is a solid reflection on the latest developments, challenges, and opportunities in this highly expanding field. This reference examines the various types of microspheres and microcapsules essential to those who need to develop stable and impermeable products at high acidic conditions. It's also important for the novel design of slow releasing active compound capsules.

Each chapter provides an in-depth account of controlled release technologies, evidence based abstracts, descriptions of chemical and physical principals, and key relevant facts relating to food applications. Written in an accessible manner, the book is a must have resource for scientists, researchers, and engineers.



Acrylamide in Food

Analysis, Content and Potential Health Effects

Vural Gökmen Professor, Department of Food Engineering, Hacettepe University, Ankara, Turkey

Provides analytical methodologies for acrylamide determination, its occurrence in various foods and its health effects

ISBN: 978-0-12-802832-2

PUB DATE: August 2015

FORMAT: Paperback

PAGES: c. 514

AUDIENCE

Food scientists, technologists, toxicologists and food industry workers, researchers and students in these areas.

KEY FEATURES

- Provides latest information on acrylamide in various foods (bakery products, fried potato products, coffee, battered products, water, table olives, etc.)
- Explores acrylamide in the food chain in the context of harm, such as acrylamide and cancer, neuropathology of acrylamide, maternal acrylamide and effects on offspring and its toxic effects in tissues
- Touches on a variety of subjects, including acrylamide, high heated foods, dietary acrylamide, acrylamide formation, N-acetyl-S-(2-carbamoylethyl)-cysteine (AAMA), acrylamide removal, L-asparaginase, and acrylamide determination
- Presents recent analytical methodologies for acrylamide determination, including liquid chromatographic tandem mass spectrometry and gas chromatography-mass spectrometry

DESCRIPTION

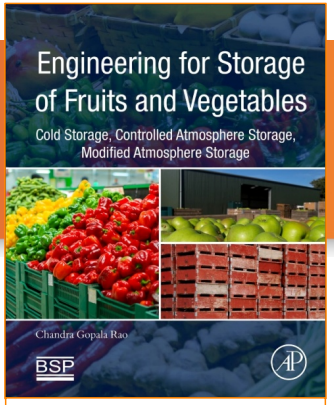
Acrylamide in Food: Analysis, Content and Potential Health Effects provides the recent analytical methodologies for acrylamide detection, up-to-date information about its occurrence in various foods (such as bakery products, fried potato products, coffee, battered products, water, table olives etc.), and its interaction mechanisms and health effects.

The book is designed for food scientists, technologists, toxicologists, and food industry workers, providing an invaluable industrial reference book that is also ideal for academic libraries that cover the domains of food production or food science.

As the World Health Organization has declared that acrylamide represents a potential health risk, there has been, in recent years, an increase in material on the formation and presence of acrylamide in different foods. This book compiles and synthesizes that information in a single source, thus enabling those in one discipline to become familiar with the concepts and applications in other disciplines of food science.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Engineering for Storage of Fruits and Vegetables

Cold Storage, Controlled Atmosphere Storage, Modified Atmosphere Storage

Chandra Gopala Rao Professor and Head (Retd), Department of Agricultural Engineering, College of Agriculture, ANGR Agricultural University, Rajendranagar, Hyderabad, INDIA

This book provides a comprehensive update on the topics of cold storage, controlled atmosphere storage, and modified atmosphere storage for fruits and vegetables

ISBN: 978-0-12-803365-4

PUB DATE: August 2015

FORMAT: Paperback

PAGES: c. 874

AUDIENCE

Post graduate and Doctoral level students, R&D personnel in the field of food technology and Food Engineering.

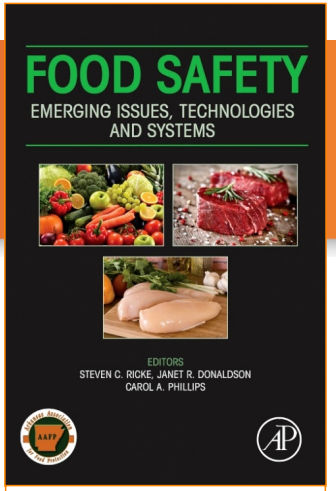
KEY FEATURES

- Covers a wide variety of related topics, from post-harvest physiology of fruits and vegetables, to the various aspects of controlled atmosphere storages
- Explains the application of water activities and enzyme kinetics for predicting shelf life of foods and design of packaging materials
- Includes solved problems and exercises which guide students and assist with comprehension

DESCRIPTION

Engineering for Storage of Fruits and Vegetables is a comprehensive reference that provides an understanding of the basic principles of cold storage load estimation, refrigeration capacity calculations for various types of cold storages, and other topics of evaporative cooling, thus demonstrating the important principles for designing low cost precooling chambers.

The book is written in an accessible manner to provide a solid understanding of different environments and their considerations to give readers the confidence they need to design suitable packaging materials by understanding parameters, including reaction rates, deteriorative reactions, Arrhenius equations, Q10, K, D, Z parameters, and their influence on reaction rates.



Food Safety

Emerging Issues, Technologies and Systems

Steven C Ricke Food Science Department, Division of Agriculture, University of Arkansas, Fayetteville, AR, USA
Janet R Donaldson Associate Professor, Department of Biological Sciences, Mississippi State University, MS, USA
Carol A Phillips Carol A Phillips, Professor of Microbiology, University of Northampton, UK

A systems approach to understanding and addressing major issues in the food industry

ISBN: 978-0-12-800245-2
PUB DATE: July 2015
FORMAT: Hardback
PAGES: c. 448

AUDIENCE

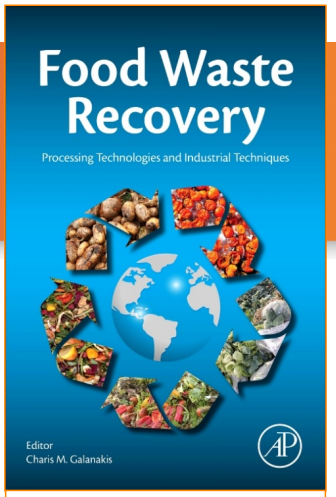
A&G and Industry markets; industry professionals in food microbiology, food science meat science food safety and food production; government officials (USDA, FDA, etc.); grad students in agriculture and food science; corporate managers in food companies

KEY FEATURES

- Examines effective control measures and molecular techniques for understanding specific pathogens
- Presents GFSI implementation concepts and issues to aid in implementation
- Demonstrates how operation processes can achieve a specific level of microbial reduction in food
- Offers tools for validating microbial data collected during processing to reduce or eliminate microorganisms in foods

DESCRIPTION

Food Safety: Emerging Issues, Technologies and Systems offers a systems approach to learning how to understand and address some of the major complex issues that have emerged in the food industry. The book is broad in coverage and provides a foundation for a practical understanding in food safety initiatives and safety rules, how to deal with whole-chain traceability issues, handling complex computer systems and data, foodborne pathogen detection, production and processing compliance issues, safety education, and more. Recent scientific industry developments are written by experts in the field and explained in a manner to improve awareness, education and communication of these issues.



Food Waste Recovery

Processing Technologies and Industrial Techniques

Edited by: ***Charis Michael Galanakis*** Charis M. Galanakis, PhD, R&I Director at Galanakis Laboratories

A guide for scientists and researchers to develop a strategy for the recapture of valuable compounds during food waste recovery

"There is no doubt that with rising populations, food wastage is of ever growing significance. We are now at a point that it is no longer sufficient to simply reduce the amount of industrial or supply chain waste, whether agricultural or processing by-product, but to eliminate it. To achieve such targets, the inherent value; nutritional or functional, must be recovered from any waste stream. This requires a deep knowledge of the potential of such waste material, which in turn can drive the innovation process to realise that value. ***Food Waste Recovery*** *edited by Dr. Charis Galankis provides the detailed insight needed to address these challenges head on. With detailed reviews of food wastage sources, potential value of waste streams and the traditional, innovative and emerging extraction and recovery technology, this book achieves the editors vision of producing an essential reference tool for food and drink professionals tackling the increasingly important issue of food waste."* -- Steve Osborn B.Sc. (hons), M.Phil., C.SCI., FIFST, Principal consultant - Food and Beverage, The Aurora Ceres Partnership Ltd.

ISBN: 978-0-12-800351-0

PUB DATE: July 2015

FORMAT: Hardback

PAGES: c. 392

AUDIENCE

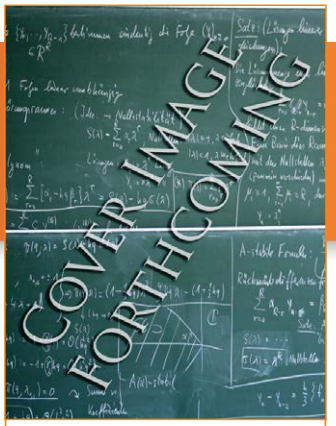
Food technologists, researchers, scientists, engineers, professionals and students working or studying in food and by-products processing area

KEY FEATURES

- Presents a holistic methodology (the so-called "5-Stages Universal Recovery Process") and a general approach (the so-called "Universal Recovery Strategy") to ensure optimized management of the available technologies and recapture of different high added-value compounds from any waste source
- Includes characteristics, safety and cost issues of conventional and emerging technologies, the benefits of their application in industry, and commercialized applications of real market products
- Demonstrates all aspects of the recovery process such as preservation of the substrate, yield optimization, preservation of functionality of the target compounds during processing, and more

DESCRIPTION

Food Waste Recovery: Processing Technologies and Industrial Techniques acts as a guide to recover valuable components of food by-products and recycle them inside the food chain, in an economic and sustainable way. The book investigates all the relevant recovery issues and compares different techniques to help you advance your research and develop new applications. Strong coverage of the different technologies is included, while keeping a balance between the characteristics of current conventional and emerging technologies. This is an essential reference for research outcomes.



Feeding Everyone No Matter What

Managing Food Security After Global Catastrophe

David Denkenberger Global Catastrophic Risk Institute, Durango, CO, USA
Joshua M. Pearce Michigan Technological University, Houghton, MI, USA

Presents starting points for scientists and engineers focused on food security issues related to specific events impacting food production capability

NB: Due to the inadvertent assignment of a previously used ISBN, this book was originally published under an incorrect identifying number. The book has now been given its own unique ISBN and is otherwise identical in every way to the original publication.

ISBN: 978-0-12-804447-6
PUB DATE: July 2015
FORMAT: Paperback
PAGES: c. 116

AUDIENCE

Researchers, professionals and students in food security, food engineering, disaster management and public health

KEY FEATURES

- Summarizes the severity and probabilities of global catastrophe scenarios, which could lead to a complete loss of agricultural production
- More than 10 detailed mechanisms for global-scale solutions to the food crisis and their evaluation to test their viability
- Detailed roadmap for future R&D for human survival after global catastrophe

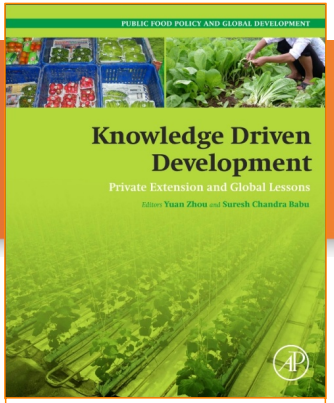
DESCRIPTION

NB: Due to the inadvertent assignment of a previously used ISBN, this book was originally published under an incorrect identifying number. The book has now been given its own unique ISBN and is otherwise identical in every way to the original publication.

Feeding Everyone No Matter What presents a scientific approach to the practicalities of planning for long-term interruption to food production.

The primary historic solution developed over the last several decades is increased food storage. However, storing up enough food to feed everyone would take a significant amount of time and would increase the price of food, killing additional people due to inadequate global access to affordable food. Humanity is far from doomed, however, in these situations - there are solutions.

This book provides an order of magnitude technical analysis comparing caloric requirements of all humans for five years with conversion of existing vegetation and fossil fuels to edible food. It presents mechanisms for global-scale conversion including: natural gas-digesting bacteria, extracting food from leaves, and conversion of fiber by enzymes, mushroom or bacteria growth, or a two-step process involving partial decomposition of fiber by fungi and/or bacteria and feeding them to animals such as beetles, ruminants (cows, deer, etc), rats and chickens. It includes an analysis to determine the ramp rates for each option and the results show that careful planning and global cooperation could ensure the bulk of humanity and biodiversity could be maintained in even in the most extreme circumstances.



Knowledge Driven Development

Private Extension and Global Lessons

Edited by: ***Yuan Zhou*** Sygenta Foundation, Basel, Switzerland
Suresh Babu Int'l Food Policy Research Institute, Washington, DC, USA

Real-world cases provide information about the role and capacity of private companies in knowledge sharing and intensification through agricultural extension

A Volume in the Public Policy and Global Development Series.

ISBN: 978-0-12-802231-3
PUB DATE: June 2015
FORMAT: Paperback
PAGES: c. 276

AUDIENCE

Academic researchers, international development organizations (both government and NGO), advanced level students in agriculture/policy development

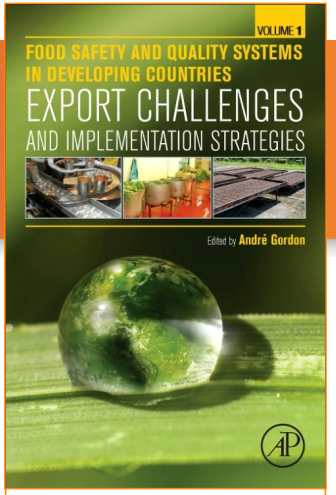
KEY FEATURES

- Provides understanding of different knowledge sharing and intensification models of extension delivery and financing by private companies across the agricultural value chains
- Assesses the factors leading to successes or failures of various approaches
- Draws lessons and recommendations for future endeavors relating to private extension policies and programs

DESCRIPTION

Knowledge Driven Development: ***Private Extension and Global Lessons*** uses actual cases written specifically to study the role and capacity of private companies in knowledge sharing and intensification through agricultural extension. Descriptions of specific models and approaches are teased out of complex situations exhibiting a range of agricultural, regulatory, socio-economic variables. Illustrative cases focus on a particular agricultural value chain and elaborate the special feature of the associated private extension system.

Chapters presenting individual cases of private extension also highlight specific areas of variations and significant deviance. Each chapter begins with a section describing the background and agricultural context of the case, followed by a description of the specific crop value chain. Based on understanding of this context, extension models and methods by private companies receive deeper analysis and definition in the next section. This leads to a discussion of the private extension with respect to its relevance, efficiency, effectiveness, equity, sustainability and impact. Following that, comparison with public extension, the uniqueness of the knowledge intensification model, and lessons for its replication and scaling up are elaborated. The final chapter summarizes the major results from the ten cases presented, looking at the trends, commonalities and differences of various extension approaches and the general lessons for success or failure. It concludes with a set of messages around value creation, integrated services, market links, inclusive innovation, and capacity development.



Food Safety and Quality Systems in Developing Countries

Volume One: Export Challenges and Implementation Strategies

Edited by: ***Andre Gordon*** Managing Director, Technological Solutions Limited, Jamaica

Addresses existing problems and challenges with the implementation of food safety systems from a developing country's perspective and approach

ISBN: 978-0-12-801227-7

PUB DATE: June 2015

FORMAT: Hardback

PAGES: c. 170

AUDIENCE

Food safety practitioners, regulators around the world; trade practitioners, international trade lawyers, exporters in developing countries (globally), buyers interested in imports from developing countries, international organizations, universities and lecturers on food safety, food export trading house businesses; Consultants, Food Science students, agriculture students

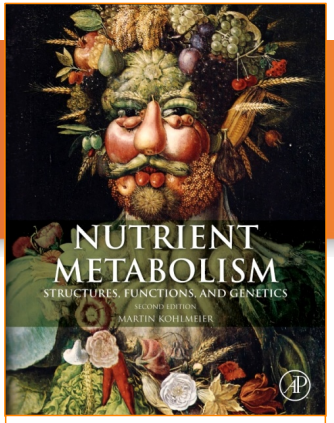
KEY FEATURES

- Includes accessible, relevant case studies of instances when food safety was compromised and offers practical scientific input in dealing with and preventing these issues
- Discusses the role and importance of research and documentation of food safety when exporting products
- Presents risk analysis examples from the past and present for products from various countries and different perspectives including the United States, Canada, Europe, Mexico, India, South Africa, Haiti, Jamaica, and more
- Offers successful strategies for developing food safety and quality systems from a national and firm-level perspective relevant to academics, regulators, exporters, importers and major distributors handling food from various developing countries

DESCRIPTION

Food Safety and Quality Systems in Developing Countries, Volume One: Export Challenges and Implementation Strategies considers both the theoretical and practical aspects of food safety and quality systems implementation by major world markets and new and emerging markets in developing countries. This reference examines issues facing exporters and importers of traditional foods the characteristics of the food and its distribution channels, and market access from a historical and current context to present best practices.

This must-have reference offers real-life, practical approaches for foods from around the world, offering help to those who have found it difficult to implement sustainable, certifiable food safety and quality systems into their businesses and provides scientifically sound solutions to support their implementation.



Nutrient Metabolism, 2e

Structures, Functions, and Genes

Martin Kohlmeier Department of Nutrition, University of North Carolina Schools of Medicine and Public Health, Chapel Hill, NC, USA

A comprehensive overview of the supply and use of nutrients in the human body and how the body regulates their intake

ISBN: 978-0-12-387784-0

PREVIOUS EDITION ISBN: 9780124177628

PUB DATE: May 2015

FORMAT: Hardback

PAGES: c. 870

AUDIENCE

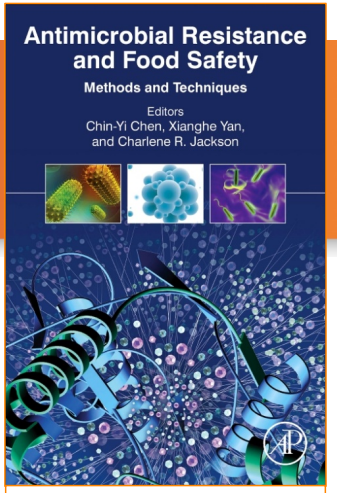
Nutritionists, dietitians, food scientists, and biochemists who work with nutrition

KEY FEATURES

- Latest research findings on health and clinical effects of nutrients and of interventions affecting nutrient supply or metabolism
- Each nutrient covered contains a nutritional summary describing its function, food sources, dietary requirements, potential health risks if deficient, and impact of excessive intake.
- Nutrient information immediately accessible--from source to effect--in one volume

DESCRIPTION

Nutrient Metabolism, Second Edition, provides a comprehensive overview of the supply and use of nutrients in the human body and how the body regulates intake. Chapters detail the principles determining digestion and absorption of food ingredients and how these compounds and their metabolites get into the brain, cross the placenta and pass through the kidneys. Each nutrient's coverage contains a nutritional summary that describes its function, its food sources, dietary requirements, potential health risks if deficient, and impact of excessive intake. This handbook contains the latest information on the scope of structures, processes, genes and cofactors involved in maintaining a healthy balance of nutrient supplies. Of interest to a wide range of professionals because nutrient issues connect to so many audiences, the book contains a useful link to dietary supplements.



Antimicrobial Resistance and Food Safety

Methods and Techniques

Edited by: ***Chin-Yi Chen*** USDA-ARS-ERRC, Wyndmoor, PA, USA
Xianghe Yan USDA-ARS-ERRC, Wyndmoor, PA, USA
Charlene R. Jackson USDA-ARS, Russell Research Center, Athens, GA, USA

The only resource that fully analyzes mechanisms, genetics, physiology, and adaptability of all major food-related pathogens and their relevance to food safety, public health, and government regulation

ISBN: 978-0-12-801214-7

PUB DATE: April 2015

FORMAT: Hardback

PAGES: c. 434

AUDIENCE

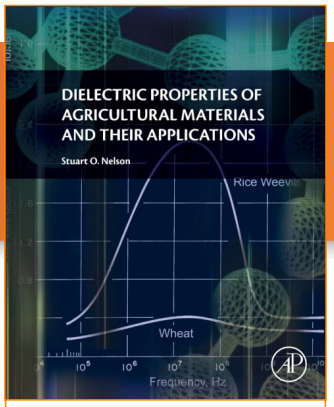
Research Biologists, Microbiologists, Researchers in government, and product development managers as well as their allied industries

KEY FEATURES

- Includes analysis of all major pathogens of concern
- Provides many case studies and examples of fundamental research findings
- Presents recent advances in methodologies and analytical software
- Demonstrates risk assessment using information technologies in foodborne pathogens

DESCRIPTION

Antimicrobial Resistance and Food Safety: Methods and Techniques introduces antimicrobial resistant food-borne pathogens, their surveillance and epidemiology, emerging resistance and resistant pathogens. This analysis is followed by a systematic presentation of currently applied methodology and technology, including advanced technologies for detection, intervention, and information technologies. This reference can be used as a practical guide for scientists, food engineers, and regulatory personnel as well as students in food safety, food microbiology, or food science.



Dielectric Properties of Agricultural Materials and their Applications

Stuart Nelson ARS-USDA, Athens, GA, USA

Provides in one source basic dielectric properties of agricultural materials, their measurement, and applications for solving problems in agricultural and biological engineering research

ISBN: 978-0-12-802305-1

PUB DATE: April 2015

FORMAT: Paperback

PAGES: c. 272

AUDIENCE

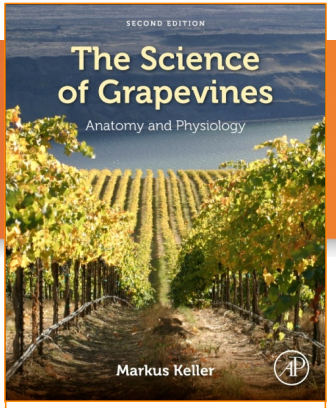
Research engineers and scientists in university, government, and private industry sectors, graduate students and undergraduate students interested in new applications for the solution of agricultural and related problems. Agricultural and Biological Engineers.

KEY FEATURES

- Presents applications of dielectric properties for sensing moisture in grain and seed and the use of such properties in radio-frequency and microwave dielectric heating of agricultural materials
- Offers information for finding correlations between dielectric properties and quality attributes such as sweetness in melons, or other desired characteristics of agricultural products
- Identifies conditions for selective dielectric heating of materials such as insects in grain or biological organisms in soils
- Provides a solid understanding of dielectric properties and the variables that influence these properties

DESCRIPTION

Dielectric Properties of Agricultural Materials and Their Applications provides an understanding of the fundamental principles governing dielectric properties of materials, describes methods for measuring such properties, and discusses many applications explored for solving industry problems. The information in this reference stimulates new research for solving problems associated with production, handling, and processing of agricultural and food products. Anyone seeking a better understanding of dielectric properties of materials and application of radio-frequency and microwave electromagnetic energy for solution of problems in agriculture and related fields will find this an essential resource.



The Science of Grapevines, 2e

Anatomy and Physiology

Markus Keller Irrigated Agriculture Research and Extension Center, Washington State University, Prosser, WA, USA

WINNER of the 2010 Jury Award from the Organisation Internationale de la Vigne et du Vin (OIV) for best viticulture book of the year, now fully revised and updated

ISBN: 978-0-12-419987-3

PREVIOUS EDITION ISBN: 978-0-12-374881-2

PUB DATE: January 2015

FORMAT: Hardback

PAGES: c. 510

AUDIENCE

Vineyard and/or winery owners, growers, vineyard managers, technical viticulturists, winemakers, students, consultants, and wine journalists

KEY FEATURES

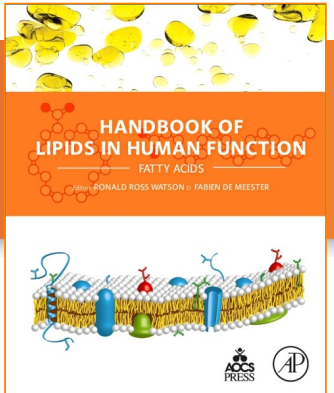
- Chapter 7 broken into two chapters, now "Environmental Constraints and Stress Physiology and Chapter 8 "Living with Other Organisms" to better reflect specific concepts
- Integration of new research results including:
  - Latest research on implementing drip irrigation to maximize sugar accumulation within grapes
  - Effect of drought stress on grapevine's hydraulic system and options for optimum plant maintenance in drought conditions
  - The recently discovered plant hormone – strigolactones – and their contribution of apical dominance that has suddenly outdated dogma on apical dominance control
- Chapter summaries added
- Key literature references missed in the first edition as well as references to research completed since the 1e publication will be added

DESCRIPTION

The Science of Grapevines: Anatomy and Physiology is an introduction to the physical structure of the grapevine, its various organs, their functions and their interactions with the environment. Beginning with a brief overview of the botanical classification (including an introduction to the concepts of species, cultivars, clones, and rootstocks), plant morphology and anatomy, and growth cycles of grapevines, **The Science of Grapevines** covers the basic concepts in growth and development, water relations, photosynthesis and respiration, mineral uptake and utilization, and carbon partitioning.

These concepts are put to use to understand plant-environment interactions including canopy dynamics, yield formation, and fruit composition, and concludes with an introduction to stress physiology, including water stress (drought and flooding), nutrient deficiency and excess, extreme temperatures (heat and cold), and the impact and response to of other organisms.

Based on the author's years of teaching grapevine anatomy as well as his research experience with grapevines and practical experience growing grapes, this book provides an important guide to understanding the entire plant.



Handbook of Lipids in Human Function

Fatty Acids

Edited by: ***Ronald Ross Watson*** Health Promotion Sciences Department, Mel and Enid Zuckerman College of Public Health, and School of Medicine, University of Arizona, Tucson, AZ, USA
Fabien Demeester DMF Ltd Co, Marche, Belgium TsimTsoum Institute, Krakow, Poland

ISBN: 978-1-63067-036-8
PUB DATE: December 2015
FORMAT: Hardback
PAGES: c. 810

AUDIENCE
food scientists, lipidologists, and nutritionists

Current research in people and animal models that defines the roles and research status of fatty acids in major areas of health and disease

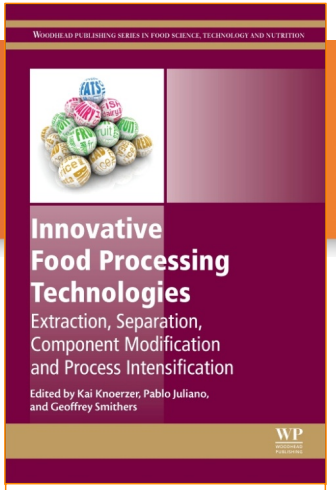
KEY FEATURES

- Discusses the importance of essential fatty acids in maintaining cardio- and cerebro-vascular health
- Explains the metabolic risks associated with deficiencies and/or imbalance of essential fatty acids
- Explores the promise of essential fatty acids as adjuvants to pharmacopoeia
- Suggests interventions with personalized lipid diets

DESCRIPTION

Handbook of Lipids in Human Function: Fatty Acids presents current research relating to health issues whose impact may be modified by adopting personalized diets and lifestyle interventions of the consumption of fatty acids. Addressing cardiovascular and neurological diseases as well as cancer, obesity, inflammatory conditions, and lung disease, the authors correlate lipid sources with specific conditions, providing important insights into preventative as well as response-based actions designed to positively impact health outcomes.

The material is presented in 29 chapters and brings together the research and work of an international team of experts. designed to bridge the gap between traditional approaches to dietary interventions and leading edge integrated health strategies, *Handbook of Lipids in Human Function: Fatty Acids* is a valuable resource for researchers and clinicians.



Innovative Food Processing Technologies

Extraction, Separation, Component Modification and Process Intensification

Edited by: ***K Knoerzer*** Research Project Leader, CSIRO, Australia
Pablo Juliano Research Scientist, CSIRO, Australia
Geoffrey W Smithers Freelance Food Industry Consultant, Australia

WP WOODHEAD PUBLISHING

As an essential volume on food processing technologies, this book details a wide range of processes, advancements, and emerging technologies, while focusing on advancements in new and novel non-thermal processing technologies that allow food producers to modify and process food with minimal damage

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100294-0

PUB DATE: June 2016

LIST PRICE:
£200.00/€240.00/$330.00

FORMAT: Hardback

PAGES: c. 704

AUDIENCE

R&D managers working within food manufacturing and processing firms as well as consultants working in food processing for food companies

KEY FEATURES

- Provides information on a variety of food processing technologies
- Focuses on advances in new and novel non-thermal processing technologies which allow food producers to modify and process food with minimal damage to the foodstuffs
- Presents a strong focus on the application of technologies in a variety of situations
- Created by editors who have a background in both the industry and academia

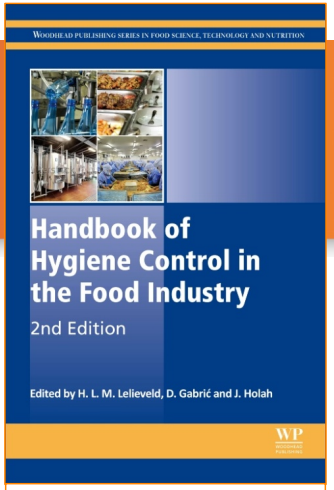
DESCRIPTION

Innovative Food Processing Technologies: Extraction, Separation, Component Modification and Process Intensification focuses on advances in new and novel non-thermal processing technologies which allow food producers to modify and process food with minimal damage to the foodstuffs.

The book is highly focused on the application of new and novel technologies, beginning with an introductory chapter, and then detailing technologies which can be used to extract food components. Further sections on the use of technologies to modify the structure of food and the separation of food components are also included, with a final section focusing on process intensification and enhancement.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Handbook of Hygiene Control in the Food Industry, 2e

Edited by: ***H L M Lelieveld*** Global Harmonization Initiative, Vienna, Austria; European Hygienic Engineering and Design Group, Rotterdam, The Netherlands
John Holah Holchem Laboratories, Ltd., Lancashire, UK
Domagoj Gabric FoodSciTech, Culemborg, Provincie Gelderland, The Netherlands

WP WOODHEAD PUBLISHING

An authoritative reference on food safety and quality, this book presents the latest information on the complex issues surrounding food industry design, operations, and processes necessary to improve best practices in hygiene

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100155-4
PREVIOUS EDITION ISBN: 9781855739574
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 730

AUDIENCE
Food industry professionals, food scientists, food safety professionals/managers, food microbiologists, food engineers, public health/government officials

KEY FEATURES

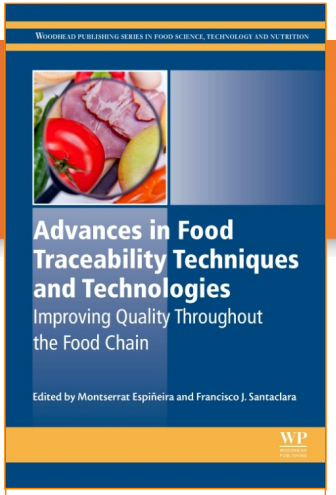
- Presents the latest research and development in the field of hygiene, offering a broad range of the microbiological risks associated with food processing
- Provides practical hygiene related solutions in food facilities to minimize foodborne pathogens and decrease the occurrence of foodborne disease
- Includes the latest information on biofilm formation and detection for prevention and control of pathogens as well as pathogen resistance

DESCRIPTION

Handbook of Hygiene Control in the Food Industry, Second Edition, continues to be an authoritative reference for anyone who needs hands-on practical information to improve best practices in food safety and quality.

The book is written by leaders in the field who understand the complex issues of control surrounding food industry design, operations, and processes, contamination management methods, route analysis processing, allergenic residues, pest management, and more.

Professionals and students will find a comprehensive account of risk analysis and management solutions they can use to minimize risks and hazards plus tactics and best practices for creating a safe food supply, farm to fork.



Advances in Food Traceability Techniques and Technologies

Edited by: ***Montserrat Espiñeira*** Researcher at the Research Department of Living Resources, Vigo, Spain
Francisco J Santaclara Researcher at the Research Department of Living Resources, Vigo, Spain

WP WOODHEAD PUBLISHING

Edited by leaders in the field, this book covers the range of food traceability advances that are of great importance to both food quality and safety and includes case studies evaluating how food traceability has been successfully implemented in various food stuffs

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100310-7
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 824

AUDIENCE
Professionals working in government/industry responsible for food traceability, as well as academics and researchers working in the field of developing food traceability testing equipment/techniques

KEY FEATURES

- Provides a wide ranging overview of all recent advances in food traceability techniques and technologies
- Presents case studies covering when food traceability techniques have been applied to a range of food stuffs
- Covers the legal aspects of food traceability in the EU, the USA, and around the world

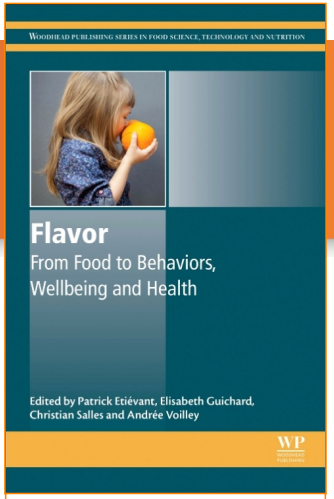
DESCRIPTION

Advances in Food Traceability Techniques and Technologies covers in detail a topic of great importance to both the food industry which is obliged to provide clear and accurate labeling of their products and the government and other organizations which are tasked with verification of claims of food quality and safety.

The traceability of food products is becoming ever more important as globalization continues to increase the complexity of food chains. Coverage in the book includes the wide range of technologies and techniques which have been utilized in the tracing of food products. In addition, the ways in which the misuse of food traceability will affect the quality of food is also covered throughout.

The first part of the book introduces the concept of traceability in the food industry, highlighting advantages of a robust traceability and the difficulties involved in implementing them. The second part looks at the technologies used to trace products, and the third section reviews the legal requirements for food traceability in the EU, the US, and the rest of the world.

The final section contains a number of case studies which evaluate how food traceability has been successfully implemented in various foods focusing on the quality of the food.



Flavor

From Food to Behaviors, Wellbeing and Health

Edited by: ***P Etievant*** Director of the Nutrition, Chemical, Food Safety and Consumer Behaviour Divisions, The French National Institute for Agronomic Research; ***Elisabeth Guichard*** Head of Flavour Vision and Consumer Behaviour, The French National Institute for Agronomic Research ; ***Christian Salles*** Senior Researcher, Flavour Vision and Consumer Behaviour division, The French National Institute for Agronomic Research (INRA)
Andree Voilley Professor, Université de Bourgogne, France

WP WOODHEAD PUBLISHING

This comprehensive edited volume explains the different mechanisms of flavor perception from food ingestion to sensory image integration that includes a multidisciplinary approach that discussing chemistry and biochemistry, psychology, neurobiology, and sociology as well as the influence of age, physiological disorders, and social environments

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100295-7
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 854

AUDIENCE

Academics working in the areas of sensory science, food quality, nutrition and human sciences; R&D professionals in food companies working to develop foods and nutritionists.

KEY FEATURES

- Uniquely brings together multidisciplinary fields to explain, in a narrative structure, how flavor compounds may modulate food intake and behavior
- Includes discussions of chemistry and biochemistry, psychology, neurobiology, and sociology
- Presents an extremely current view that offers a wide perspective on flavor, an area of rapidly expanding knowledge
- Edited by renowned experts in the field of flavor perception

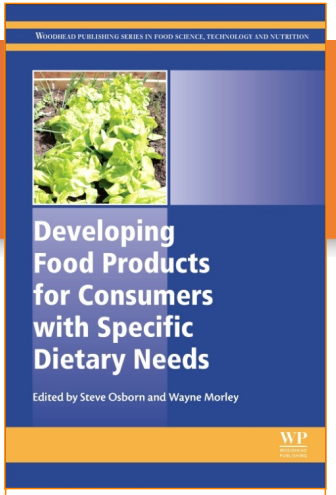
DESCRIPTION

Flavor: From Food to Behaviors, Wellbeing and Health is the first single-volume resource focused on the different mechanisms of flavor perception from food ingestion, to sensory image integration and the physiological effects that may explain food behaviors.

The information contained is highly multidisciplinary, starting with chemistry and biochemistry, and then continuing with psychology, neurobiology, and sociology. The book gives coherence between results obtained in these fields to better explain how flavor compounds may modulate food intake and behavior.

When available, physiological mechanisms and mathematical models are explained. Since almost half a billion people suffer from obesity and food related chronic diseases in the world, and since recent research has investigated the possible roles of pleasure linked to the palatability of food and eating pleasure on food intake, food habits, and energy regulation, this book is a timely resource on the topic.

This book links these results in a logical story, starting in the food and the food bolus, and explaining how flavor compounds can reach different receptors, contribute to the emergence of a sensory image, and modulate other systems recognized as controlling food intake and food behavior. The influence of age, physiological disorders, or social environments are included in this approach since these parameters are known to influence the impact of food flavor on human behavior.



Developing Food Products for Consumers with Specific Dietary Needs

Edited by: ***Steve Osborn*** Principal Consultant, Aurora Ceres Partnership, UK
Wayne Morley Group Head of Technical Innovation, 2 Sisters Food Group, UK

WP WOODHEAD PUBLISHING

As a best practice approach to developing foods for customers with specific dietary needs, this book explains the process of creating products for those whose specific dietary needs have emerged in recent decades due to the growth in medical conditions related to food intake

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100329-9
PUB DATE: June 2016
FORMAT: Hardback
PAGES: c. 704

AUDIENCE

Industry professionals working in new product development, research and development and marketing, as well as academics working in food development

KEY FEATURES

- Provides an overview of the organizational structure required within a company to develop foods for specific customer needs
- Includes section on the development of low-sodium, low-sugar, low-fat, and low-carbohydrate products with the aim of producing healthier foods
- Presents case studies that deliver a best practice view on developing foods for customers with specific dietary needs
- Written by industry professionals, this book offers in-depth coverage of this topic of ever increasing importance to the food industry

DESCRIPTION

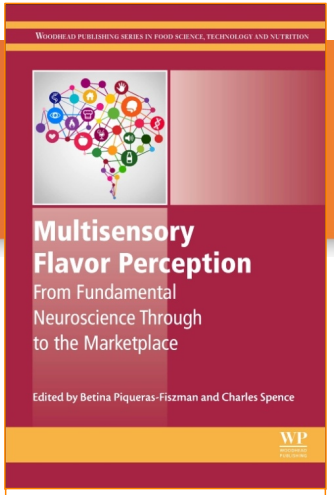
Developing Food Products for Customers with Specific Dietary Needs explains the process for developing foods for customers who have specific dietary needs, further shining a light on the number of increasing medical conditions related to food intake that have emerged in the past few decades.

From increased fat and sugar intake leading to higher levels of obesity, to greater levels of coeliac disease, the ingredients and nutritional content of food is becoming more and more important. Additionally, consumers are following particular diets for many different reasons, be it health related, or for religious or moral reasons.

The first part of the book looks, in detail, at the organizational structure required within a company to allow for the development of food products which meet the needs of these customers, while the second part presents a number of case studies highlighting the development of food products for various dietary requirements.

Precise coverage includes section on the development of low-sodium, low-sugar, low-fat, and low-carbohydrate products with the aim of producing healthier foods, as well as the development of organic and vegetarian products for consumers who are following diets for personal reasons.

The potential solutions for developing foods for customers who have specific dietary needs are likely to include both ingredients and technology developments. The ingredients area includes simple reductions as well as replacement strategies, whilst technology will be applied to both the ingredient itself and the host food product. All are aimed at maintaining the product quality as perceived by the customer.



Multisensory Flavor Perception

From Fundamental Neuroscience Through to the Marketplace

Edited by: ***Betina Piqueras-Fiszman*** Assistant Professor, Marketing and Consumer Behaviour group, Wageningen University, Netherlands
Charles Spence Professor, University of Oxford, UK

WP WOODHEAD PUBLISHING

As a pioneering examination of the latest insights from the rapidly-expanding world of multisensory flavor research, this book provides state-of-the-art coverage of the latest research, highlighting the various types of crossmodal interactions such as sound and taste and vision and taste, and showing their impact on sensory and hedonic perception

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100350-3
PUB DATE: May 2016
FORMAT: Hardback
PAGES: c. 432

AUDIENCE

Food scientists, academic researchers studying multimodal responses, sensory and consumer insight managers and scientists, psychologists and psychology students, as well as marketers and marketing managers in food companies.

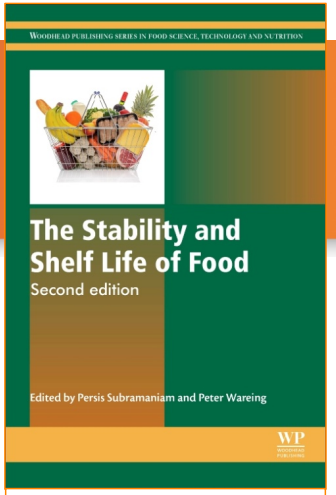
KEY FEATURES

- Authored by top academics and world leaders in the field
- Takes readers on a journey from the neurological underpinnings of multisensory flavor perception, then presenting insights that can be used by food companies to create better flavor sensations for consumers
- Offers a wide perspective on multisensory flavor perception, an area of rapidly expanding knowledge

DESCRIPTION

Multisensory Flavor Perception: From Fundamental Neuroscience Through to the Marketplace provides state-of-the-art coverage of the latest insights from the rapidly-expanding world of multisensory flavor research. The book highlights the various types of crossmodal interactions, such as sound and taste, and vision and taste, showing their impact on sensory and hedonic perception, along with their consumption in the context of food and drink.

The chapters in this edited volume review the existing literature, also explaining the underlying neural and psychological mechanisms which lead to crossmodal perception of flavor. The book brings together research which has not been presented before, making it the first book in the market to cover the literature of multisensory flavor perception by incorporating the latest in psychophysics and neuroscience.



The Stability and Shelf-Life of Food, 2e

Edited by: ***P Subramaniam*** Leatherhead Food Research, UK
Peter Wareing Principal Food Safety Advisor, Leatherhead Food Research, UK

A new edition of a highly successful book covering the stability and shelf-life of foods and beverages with a focus on processes, evaluation and product specific deterioration

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Thoroughly revised and updated edition of a very popular and well regarded book
- Includes dedicated chapters covering the shelf-life and stability of specific products making this book ideal for those working in industry
- Presents a wide coverage of the processes and factors influencing shelf-life, the evaluation of stability and shelf-life and the stability and shelf-life of particular products makes this book valuable for both academics and those working in industry

DESCRIPTION

The second edition of *The Stability and Shelf-life of Food* is a fully revised and thoroughly updated edition of this highly-successful book. This new edition covers methods for shelf-life and stability evaluation, reviewing the modelling and testing of the deterioration of products as well as the use of sensory evaluation methods for testing food spoilage.

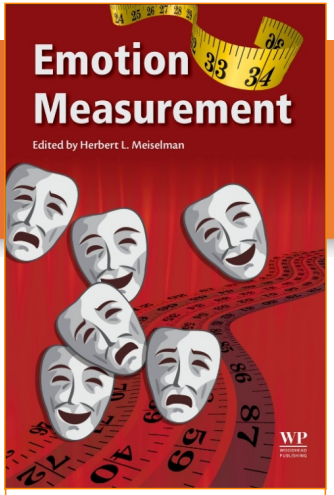
The first part of the book focuses on deteriorative processes and factors influencing shelf-life, covering aspects such as chemical deterioration, physical instability and microbiological spoilage. The effects of process and packaging on the stability and shelf-life of products are also covered in this part. Part Two reviews the methods for shelf life and stability evaluation. These include sensory evaluation methods and instrumental methods to determine food quality deterioration. The final section of the book covers stability of important ingredient categories, from oils and fats, to beverages such as beer, wine, coffee and fruit juices, in addition to bakery products and meats.

With updated chapters reflecting advances made in the field and with the addition of new chapters covering the stability and shelf-life a variety of products, this new edition will provide the latest research for both academics working in the field of food quality as well as providing essential information for food scientists working in industry.

ISBN: 978-0-08-100435-7
PREVIOUS EDITION ISBN: 978-1-85573-500-2
PUB DATE: May 2016
FORMAT: Hardback
PAGES: c. 944

AUDIENCE

Product Development Managers working within the food industry; Technical Managers in the food industry; Quality Control Managers and Personnel in the food industry; Academics working in the area of food quality research.



ISBN: 978-0-08-100508-8

PUB DATE: April 2016

FORMAT: Hardback

PAGES: c. 854

AUDIENCE

Food and Consumer Product Scientists, academic researchers studying emotions, sensory & consumer insight managers & Scientists, psychologists & psychology Students and marketing managers.

Emotion Measurement

Edited by: ***Herbert L Meiselman*** Internationally known expert and consultant in sensory and consumer research, product development and food service system design and evaluation based in the USA

WP
WOODHEAD PUBLISHING

A practical guide to the applied and academic methods of emotion measurement for food and sensory scientists, product development managers, and product development practitioners in industry

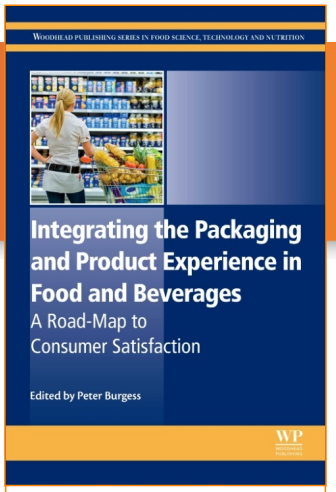
KEY FEATURES

- Serves as the first book on the market on emotion measurement aimed at sensory scientists and production development practitioners working in commercial R and D
- Also useful for psychologists with an interest in emotion
- Brings together applied and academic strands of emotion measurement research for the first time
- Focuses on cross-cultural studies of emotions, which is currently lacking from most of the literature in the field

DESCRIPTION

Emotion Measurement reviews academic and applied studies in order to highlight key elements of emotions which should be considered in the development and validation of newer commercial methods of emotion measurement. The goal of the book is practical, but the approach will be both academic and applied. It is aimed primarily at sensory scientists and the product developers they work alongside who require knowledge of measuring emotion to ensure high levels of consumer acceptability of their products.

The book begins with a review of basic studies of emotion, including the theory, physiology, and psychology of emotions – these are the standard studies of which food and sensory scientists as well as product developers need to be aware. The next section highlights methods for studying emotions on a relatively basic level. The book then moves to practical applications, with chapters on emotion research in food and beverage, as well as in a range of product and clinical settings. Finally, there is a treatment of cross-cultural research on emotions. This is critical because much of the newer commercial research is aimed at markets around the world, requiring methods which work in many cultures. The book ends with an integrative summary of the material presented.



Integrating the Packaging and Product Experience in Food and Beverages

A Road-Map to Consumer Satisfaction

Edited by: ***Peter Burgess*** Head of Department for Consumer and Sensory Sciences, Campden BRI, UK

WP WOODHEAD PUBLISHING

Focusing on the inter-relationship between packaging design and product experience this practical guide for product developers and marketers includes an extensive overview of an adapted satisfaction scale, tailored for the food and beverage sector, which identifies varying satisfaction response modes such as contentment, pleasure, and delight

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100356-5

PUB DATE: April 2016

FORMAT: Hardback

PAGES: c. 288

AUDIENCE

Consumer and sensory scientists, researchers and academics in the areas of food science, packaging development, product design, new product marketing managers and packaging designers for fast-moving consumer goods (FMCGs)

KEY FEATURES

- Focuses on the inter-relationship between packaging and the product experience, specifically in the context of the food and beverage sector
- Presents the expectancy disconfirmation model of satisfaction, which is well developed within the social sciences, to the food and beverage sector
- Contains case studies demonstrating how these practices can be used in industry to better enhance customer's responses to products
- Includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product

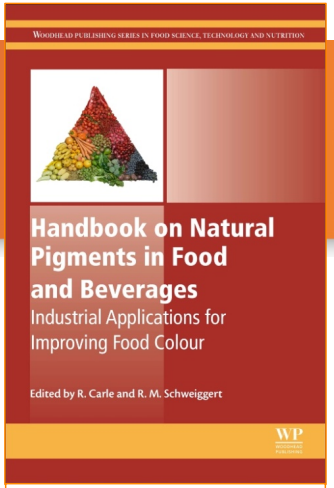
DESCRIPTION

Integrating the Packaging and Product Experience in Food and Beverages: A Road-Map to Consumer Satisfaction focuses on the interrelationship between packaging and the product experience. In both industry and academia there has been a growing interest in investigating approaches that capture consumer responses to products that go beyond traditional sensory and liking measures. These approaches include assessing consumers' emotional responses, obtaining temporal measures of liking, as well as numerous published articles considering the effect of situation and context in the evaluation of food and beverage products.

For fast-moving consumer goods (FMCG) products in particular, packaging can be considered as a contributor to consumer satisfaction. Recent cross-modal research illustrated consumers' dissatisfaction or delight with a product can be evoked when there is dissonance between the packaging and the product experience.

The book includes an extensive overview of an adapted satisfaction scale that has been tailored for the food and beverage sector and which identifies varying satisfaction response modes such as contentment, pleasure, and delight with a product. This is an important development as it provides insights about products that can be used to market specific categories and brands of foods and beverages.

The book demonstrates the value of this approach by bringing together case studies that consider the interrelationships between packaging design, shape, on-pack sensory messages, expectations, and consumer satisfaction with the product.



Handbook on Natural Pigments in Food and Beverages

Industrial Applications for Improving Food Colour

Edited by: ***Reinhold Carle*** Professor, Department of Plant Foodstuff Technology, University of Hohenheim, Germany
Ralf Schweiggert Post-Doctoral Researcher, Department of Plant Foodstuff Technology, University of Hohenheim, Germany

As an essential volume in detailing the use of natural food colorants on a product by product basis, this book is written with industrial applications in mind, with each chapter focusing on a color solution for a specific commodity that will provide food scientists with a one-stop, comprehensive reference on how to improve the color of a particular food product

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100371-8
PUB DATE: March 2016
FORMAT: Hardback
PAGES: c. 522

AUDIENCE

R&D staff working within food companies and academics (Professors, research staff, teaching staff, postgraduate students).

KEY FEATURES

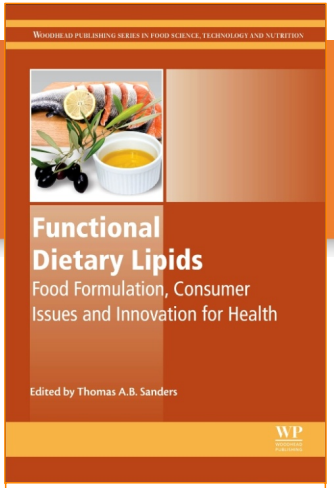
- Presents recent advances in consumer demand and worldwide legislation regarding natural food colorants
- Discusses the use of natural food colorants for one specific product category per chapter rather than one pigment class per chapter – this makes the book extremely useable for industrialists working in a specific sector
- Contains a comprehensive array of product-specific coloration approaches, from using pigment-enriched feed additives to the direct addition of color formulations

DESCRIPTION

Handbook on Natural Pigments: Industrial Applications for Improving Food Colour is unique in its approach to the improvement of food colors. The book is written with industrial applications in mind, with each chapter focusing on a color solution for a specific commodity that will provide food scientists with a one-stop, comprehensive reference on how to improve the color of a particular food product.

The first section of the book looks at the legal frameworks which underpin natural food colorings, also investigating the consumer expectations of food color. The second section of the book focuses on specific industrial applications of natural colorants with chapters covering the use of natural colorants in aqueous food products, cereal-based foods, and meat products, amongst many other topics.

The various pigments which can be used to effectively color these commodities are presented with information on safety and testing included throughout. The final section in the book looks at recent developments and future perspectives in natural food colorings. There are chapters which cover the health benefits of natural pigments, the use of novel fruits and vegetables in pigments, and stable natural solutions for blue colorings.



Functional Dietary Lipids

Food Formulation, Consumer Issues and Innovation for Health

Edited by: ***T Sanders*** Professor of Nutrition & Dietetics, King's College London, UK

WP WOODHEAD PUBLISHING

This book provides an in-depth study of the functionality and nutritional benefits of dietary fat in food, discussing this important component of the human diet and the ways it plays an essential functional role in many foods, including sections on the chemistry of edible fats, manufacturing issues, fat reformulation for calorie reduction and more

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-247-1

PUB DATE: December 2015

FORMAT: Hardback

PAGES: c. 310

AUDIENCE

R&D personnel using fats in food manufacturing, lipid scientists, nutritional experts and academics with a research interest in this area.

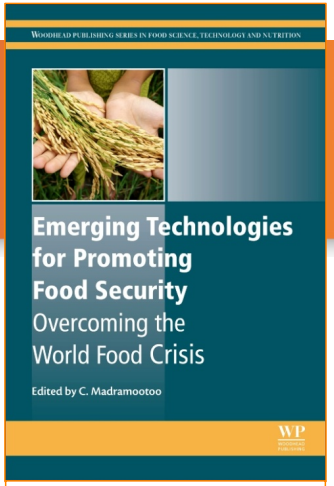
KEY FEATURES

- Comprehensively examines the functionality and nutritional benefits of dietary fat in food
- Discusses the chemistry of edible fats, manufacturing issues, including the replacement of trans fatty acids in food, fat reformulation for calorie reduction, thermal stability of fats, and more
- Considers manufacturing issues of dietary fat in foods
- Addresses issues affecting the consumer relationship with fat, such as regulation, marketing, and health claims

DESCRIPTION

Functional Dietary Lipids: Food Formulation, Consumer Issues and Innovation for Health discusses this important component of the human diet and the ways it plays an essential functional role in many foods. The book covers the functionality and nutritional benefits of dietary fat in food in terms of formulation, manufacturing, and innovation for health.

After an introduction by the editor reviewing the role of fats in the human diet, the book discusses the chemistry of edible fats, manufacturing issues, including the replacement of trans-fatty acids in food, fat reformulation for calorie reduction, thermal stability of fats, and the flavor and functional texture and melting characteristics of fats in food. Subsequent chapters address the effect of dietary lipid intake on various health issues and the potential health benefits of bioactive compounds in dietary lipids, with final sections discussing issues that affect the consumer relationship with fat, such as regulation, marketing, and health claims.



Emerging Technologies for Promoting Food Security

Overcoming the World Food Crisis

Edited by: ***Chandra Madramootoo*** Dean of the Faculty of Agricultural and Environmental Sciences and Associate Vice Principal, McGill University, Canada

WP WOODHEAD PUBLISHING

This book explores a range of approaches to promoting global food security, including novel and existing agricultural and husbandry techniques for safe and sustainable food production that will combat rising energy prices, increased biofuel use, water scarcity, and the rising world population

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-335-5

PUB DATE: December 2015

FORMAT: Hardback

PAGES: c. 160

AUDIENCE

R&D personnel in agriculture and animal husbandry, food scientists with an interest in sustainability, those involved in policy-making and standard-setting and academics with research interests in the area of food security.

KEY FEATURES

- Provides a comprehensive overview of food security
- Thoroughly discusses rising energy prices, increased biofuel use, water scarcity, and the rising world population, all factors that directly affect worldwide food security
- Covers the emerging technologies for plant and animal food security
- Analyzes the policy issues affecting food security

DESCRIPTION

Emerging Technologies for Promoting Food Security: Overcoming the World Food Crisis discusses rising energy prices, increased biofuel use, water scarcity, and the rising world population, all factors that directly affect worldwide food security. The book examines the range of approaches to promoting global food security, including novel and existing agricultural and husbandry techniques for safe and sustainable food production.

It is divided into three parts beginning with an overview of food security, an analysis of key drivers of food insecurity, and nutrition and food security. Part Two examines emerging technologies for plant and animal food security, with subsequent chapters discussing topics from genetic and aquaculture technologies, pest and disease control, environmental and policy issues affecting food security, and an in-depth analysis of water management and methods to reduce post-harvest losses.

A Complete Course in Canning and Related Processes, 14e

Susan Featherstone Manager, Food and Beverage Technology Lab, Nampak, South Africa

WP
WOODHEAD PUBLISHING

This three volume book series is an ideal, all-inclusive reference on canning and related processes that includes information on a wide range of foods, processes and emerging trends in the field.

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-08-100688-7

PUB DATE: November 2015

FORMAT: Hardback

PAGES: c. 340

AUDIENCE

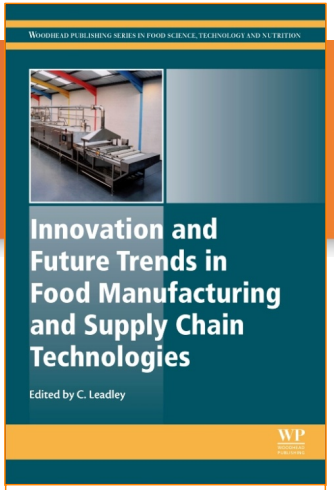
R&D professionals, QA/QC professionals and managers in the canning industry and food microbiologists and engineers with an interest in thermal processing

KEY FEATURES

- Covers all aspects of the canning process, including planning, processing, storage, and control
- Continues the tradition of the series that has educated professionals and students for over 100 years
- Extensively revised and expanded coverage in the field of food canning

DESCRIPTION

A complete course in canning is firmly established as a unique and essential guide to canning and related processes. Professionals in the canning industry and students have benefited from successive editions of the book for over 100 years. This major new edition continues that reputation, with extensively revised and expanded coverage. The three-title set is designed to cover all planning, processing, storage and quality control phases undertaken by the canning industry in a detailed, yet accessible fashion. Major changes for the new edition include new chapters on regulation and labelling that contrast the situation in different regions worldwide, updated information on containers for canned foods and new information on validation and optimization of canning processes, among many others.



Innovation and Future Trends in Food Manufacturing and Supply Chain Technologies

Edited by: ***Craig Leadley*** Novel food processing specialist, Campden BRI, UK

WP WOODHEAD PUBLISHING

This book provides an examination of emerging and future trends in food manufacturing and supply chain technologies, analyzing the drivers of change and innovation in the food industry and the current and future ways of addressing issues such as energy reduction and rising cost in manufacture

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Addresses issues such as energy reduction and rising costs in food manufacture
- Assesses current supply chain technologies and the emerging advancements in the field, including key chapters on food processing technologies
- Covers the complete food manufacturing scale, compiling significant research from academics and important industrial figures

DESCRIPTION

Innovation and Future Trends in Food Manufacturing and Supply Chain Technologies focuses on emerging and future trends in food manufacturing and supply chain technologies, examining the drivers of change and innovation in the food industry and the current and future ways of addressing issues such as energy reduction and rising costs in food manufacture.

Part One looks at innovation in the food supply chain, while Part Two covers emerging technologies in food processing and packaging. Subsequent sections explore innovative food preservation technologies in themed chapters and sustainability and future research needs in food manufacturing.

ISBN: 978-1-78242-447-5

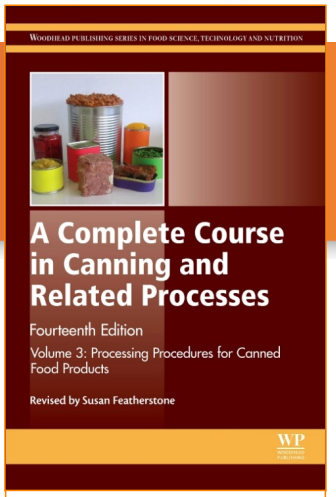
PUB DATE: November 2015

FORMAT: Hardback

PAGES: c. 282

AUDIENCE

R&D managers in the food industry, food processors and manufacturers, postgraduate students and academic researchers with an interest in food processing technology and the issues affecting it.



A Complete Course in Canning and Related Processes, 14e

Volume 3 Processing Procedures for Canned Food Products

Edited by: ***S Featherstone*** Manager, Food and Beverage Technology Lab, Nampak, South Africa

This book is an ideal, all-inclusive reference on canning and related processes that includes tactics for meat, fish, and poultry, amongst others.

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Extensively revised and expanded coverage in the field of food canning
- Designed to cover all planning, processing, storage, and quality control phases undertaken by the canning industry in a detailed, yet accessible fashion
- Examines the canning of various fruits and vegetables, in addition to meat, milk, fish, and composite products
- Updated to cover the canning of ready meals, pet food, and UHT milk

DESCRIPTION

A Complete Course in Canning and Related Processes: Volume 3, Processing Procedures for Canned Food Products, Fourteenth Edition provides a complete course in canning and is an essential guide to canning and related processes.

Professionals and students in the canning industry have benefited from successive editions of the book for over 100 years. This major new edition continues that reputation, with extensively revised and expanded coverage.

The book's three-title set is designed to cover all planning, processing, storage, and quality control phases undertaken by the canning industry in a detailed, yet accessible fashion.

Major changes for the new edition include new chapters on regulation and labeling that contrast the situation in different regions worldwide, updated information on containers for canned foods, and new information on validation and optimization of canning processes, among many other topics.

ISBN: 978-0-85709-679-1

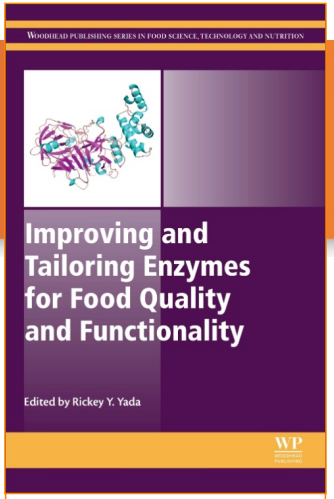
PUB DATE: September 2015

FORMAT: Hardback

PAGES: c. 524

AUDIENCE

R&D professionals, QA/QC professionals, managers in the canning industry and food microbiologists and engineers with an interest in thermal processing.



Improving and Tailoring Enzymes for Food Quality and Functionality

Edited by: ***Rickey Yada*** Dean, University of British Columbia, Vancouver, BC, Canada

WP WOODHEAD PUBLISHING

An ideal resource for readers interested in the role of enzymes in the food industry, including enzyme processing and analytical and diagnostic applications of enzymes

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-285-3

PUB DATE: July 2015

FORMAT: Hardback

PAGES: c. 24

AUDIENCE

R&D managers in the food industry; food engineering professionals; postgraduate students and academic researchers in enzymes and food processing

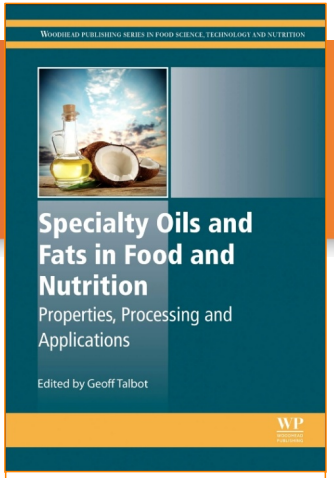
KEY FEATURES

- Provides readers with the latest information on enzymes and their unique applications in the food industry
- Explores new techniques in the production, engineering, and application of enzymes, covering sourcing, isolation, and production of enzymes for food applications
- Chapters include detailed discussions of enzyme processing, engineering and analytical and diagnostic applications of enzymes in the food industry, and enzyme applications in specific food commodities

DESCRIPTION

Improving and Tailoring Enzymes for Food Quality and Functionality provides readers with the latest information on enzymes, a biological processing tool that offers the food industry a unique means to control and tailor specific food properties.

The book explores new techniques in the production, engineering, and application of enzymes, covering sourcing, isolation, and production of enzymes for food applications. In addition, chapters include detailed discussions of enzyme processing, analytical and diagnostic applications of enzymes in the food industry, and enzyme applications in specific food commodities.



Specialty Oils and Fats in Food and Nutrition

Properties, Processing and Applications

Edited by: ***Geoff Talbot*** The Fat Consultant, UK

WP WOODHEAD PUBLISHING

An authoritative overview of the main specialty oils and fats in current use and with significant potential in food processing

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-376-8

PUB DATE: June 2015

FORMAT: Hardback

PAGES: c. 360

AUDIENCE

R&D managers and product development personnel working in the dairy, baking, dairy analogue sectors and all sectors using fats and oils. This will be particularly useful to companies reformulating their products or developing new products to alter the fat content. Academics with a research interest in the area (lipid scientists, food scientists).

KEY FEATURES

- Authored by an industry expert with 35 years of experience working for Unilever and Loders Croklaan
- Broad coverage encompasses tropical exotic oils, tree nut oils, algal oils, GM vegetable oils, and more
- Addresses growing application areas including nutraceuticals, infant formula, and ice cream and confectionery

DESCRIPTION

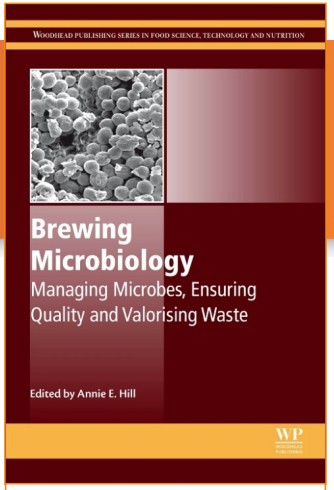
Specialty Oils and Fats in Food and Nutrition: Properties, Processing and Applications examines the main specialty oils and fats currently in use in food processing, as well as those with significant potential. Specialty oils and fats have an increasing number of applications in the food industry, due to growing consumer interest in “clean label” functional foods and the emerging markets in “free-from” and specialist foods.

Part One of this book covers the properties and processing of specialty oils and fats, with a focus on the chemistry, extraction, and quality of different fats and oils, including chapters on shea butter, tropical exotic oils, and structured triglycerides. Part Two looks at the applications of specialty oils and fats in different food and nutraceutical products, such as confectionary, ice cream, and margarine.

Specialty Oils and Fats in Food and Nutrition is a key text for R&D managers and product development personnel working in the dairy, baking, and dairy analogue sectors, or any sector using fats and oils. It is a particularly useful reference point for companies reformulating their products or developing new products to alter fat content, as well as academics with a research interest in the area, such as lipid scientists or food scientists.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Brewing Microbiology

Managing Microbes, Ensuring Quality and Valorising Waste

Edited by: ***Annie Hill*** Associate Professor at the International Centre for Brewing & Distilling, Heriot-Watt University, UK

WP WOODHEAD PUBLISHING

An essential reference examining the properties and management of microorganisms in brewing plus tactics for reducing spoilage and optimizing beer quality

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Examines key developments in brewing microbiology, discussing the microbes that are essential for successful beer production and processing
- Covers spoilage bacteria, yeasts, sensory quality, and microbiological waste management
- Focuses on developments in industry and academia, bringing together leading experts in the field

DESCRIPTION

Brewing Microbiology discusses the microbes that are essential to successful beer production and processing, and the ways they can pose hazards in terms of spoilage and sensory quality.

The text examines the properties and management of these microorganisms in brewing, along with tactics for reducing spoilage and optimizing beer quality. It opens with an introduction to beer microbiology, covering yeast properties and management, and then delves into a review of spoilage bacteria and other contaminants and tactics to reduce microbial spoilage.

Final sections explore the impact of microbiology on the sensory quality of beer and the safe management and valorisation of brewing waste.

ISBN: 978-1-78242-331-7

PUB DATE: June 2015

FORMAT: Hardback

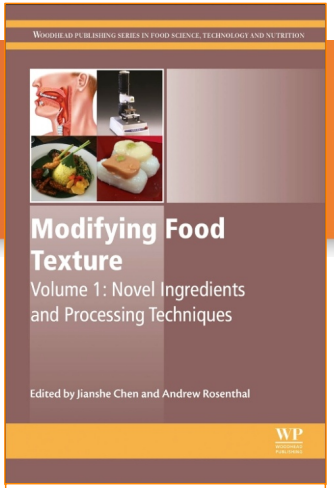
PAGES: c. 492

AUDIENCE

Microbiologists in the food and beverage industries, specifically the brewing industry, technical personnel in brewing organisations and academics with a research interest in the field

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Modifying Food Texture

Novel Ingredients and Processing Techniques

Edited by: ***Chen*** University of Leeds, UK
Andrew Rosenthal Coventry University, UK

WP WOODHEAD PUBLISHING

Discusses texture as an important aspect of consumer food acceptance and preference, highlighting the need for specific food textures for different populations of consumers

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-333-1

PUB DATE: June 2015

FORMAT: Hardback

PAGES: c. 276

AUDIENCE

R&D managers in the food industry, particularly those concentrating on niche consumer products and food formulation; hospital dietitians; postgraduate students and academics with a research interest in the area.

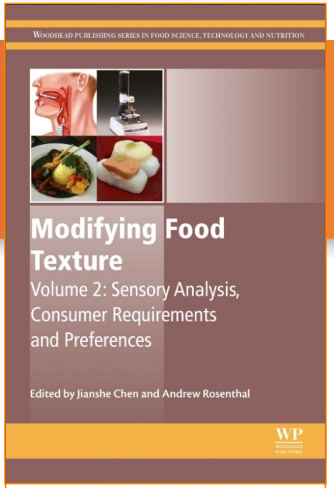
KEY FEATURES

- Discusses texture as an important aspect of consumer food acceptance and preference
- Presents findings and tactics that address the special needs of infants, the elderly, and dysphagia patients
- Topics covered include ingredients and processing techniques used in texture modification of foods, along with an overview of food texture issues, amongst others

DESCRIPTION

Modifying Food Texture, Volume 1: Novel Ingredients and Processing Techniques discusses texture as an important aspect of consumer food acceptance and preference, and the fact that specific consumer groups, including infants, the elderly, and dysphagia patients require texture-modified foods.

Topics covered include ingredients and processing techniques used in texture modification of foods, an overview of food texture issues, the novel use of processing techniques for texture modification, and the uses of food ingredients in texture-modified foods.



Modifying Food Texture

Volume 2: Sensory Analysis, Consumer Requirements and Preferences

Edited by: ***Jianshe Chen*** University of Leeds, UK
Andrew Rosenthal Coventry University, UK

WP WOODHEAD PUBLISHING

Explores texture as an important aspect of consumer food acceptance and preference, addressing the food textural needs of infants, the elderly, and dysphagia patients

KEY FEATURES

- Explores texture as an important aspect of consumer food acceptance and preference
- Addresses the food textural needs of special groups, including infants, the elderly, and dysphagia patients
- Takes an in-depth look at the product development needs of consumers, exploring the sensory analysis of food texture

DESCRIPTION

Modifying Food Texture, Volume 2: Sensory Analysis, Consumer Requirements and Preferences explores texture as an important aspect of consumer food acceptance and preference, specifically addressing the food textural needs of infants, the elderly, and dysphagia patients.

This volume covers the sensory analysis of texture-modified foods, taking an in-depth look at the product development needs of consumers and exploring the sensory analysis of food texture and the development of texture-modified foods.

ISBN: 978-1-78242-334-8

PUB DATE: June 2015

FORMAT: Hardback

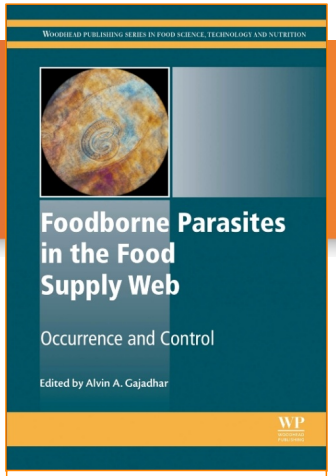
PAGES: c. 274

AUDIENCE

R&D managers in the food industry, particularly those concentrating on niche consumer products and food formulation; hospital dietitians; postgraduate students and academics with a research interest in the area

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Foodborne Parasites in the Food Supply Web

Occurrence and Control

Edited by: ***Alvin A Gajadhar*** Canadian Food Inspection Agency, Canada

WP WOODHEAD PUBLISHING

An authoritative overview of the occurrence, transmission and control of parasites in the food chain

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Provides an overview of the occurrence, transmission, and control of parasites in the food chain
- Explores the different types of foodborne parasites and the dynamics of parasite transmission in different food sources
- Highlights prevention and control methods to ensure the safety of the food chain

DESCRIPTION

Foodborne Parasites in the Food Supply Web: Occurrence and Control provides an overview of the occurrence, transmission, and control of parasites in the food chain, including an introduction to the topic from the perspectives of various issues surrounding foodborne parasites. The text then explores the different types of foodborne parasites, the dynamics of parasite transmission in different food sources, and the prevention and control of foodborne parasites in the food chain.

ISBN: 978-1-78242-332-4

PUB DATE: June 2015

FORMAT: Hardback

PAGES: c. 456

AUDIENCE

Food microbiologists and parasitologists, food safety managers in industry, regulatory and public health bodies and academics/postgraduate students with a research interest in the area

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative

Feed and Feeding Practices in Aquaculture

Edited by: ***Davis*** Dept. of Fisheries and Allied Aquaculture, Auburn University, Auburn, AL, USA

WP WOODHEAD PUBLISHING

Reviews the key properties of feeds in aquaculture, advances in feed formulation and ingredient choices, and the practicalities of feeding systems and strategies

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

"...many chapters also include a section on sources for further information...a useful reference for anyone working in the field of aquaculture nutrition."--**Aquaculture Magazine, *Feed and Feeding Practices in Aquaculture***

ISBN: 978-0-08-100506-4

PUB DATE: June 2015

FORMAT: Hardback

PAGES: c. 404

AUDIENCE

Nutritionists, farm owners and technicians in aquaculture, as well as those working in R&D in the feed production industry and academics/postgraduate students with a research interest in the area.

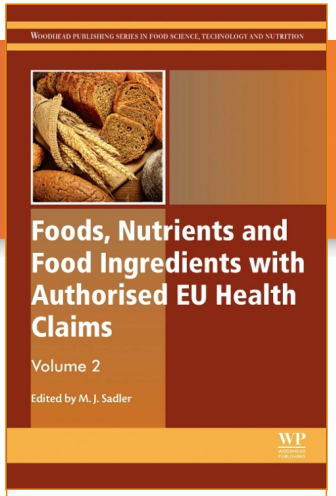
KEY FEATURES

- Reviews the key properties of aquafeed, advances in feed formulation and manufacturing techniques, and the practicalities of feeding systems and strategies
- Provides an overview of feed and fertilizer in aquaculture
- Covers feeding strategies and related issues in different areas of aquaculture

DESCRIPTION

Feed and fertilizer are significant costs in aquaculture operations and play an important role in the successful production of fish and other seafood for human consumption. This book reviews the key properties of feeds, advances in feed formulation and ingredient choices and the practicalities of feeding systems and strategies.

Feed and Feeding Practices in Aquaculture provides an authoritative and comprehensive coverage of the topic and is an essential guide for nutritionists, farm owners and technicians in aquaculture, as well as those working in R&D in the feed production industry and academics/postgraduate students with an interest in the area.



Foods, Nutrients and Food Ingredients with Authorised EU Health Claims: Volume 2

Edited by: ***Michele Sadler*** Consultant Nutrition Scientist, Rank Nutrition Ltd, UK

This second volume covers EU health claims under the European Regulation EC 1924/2006 that have subsequently been approved, looking at the properties and applications of each ingredient, evidence for the claimed health benefits and use in product development.

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-382-9

PUB DATE: May 2015

FORMAT: Hardback

PAGES: c. 318

AUDIENCE

R&D managers and technical managers in the food and beverage industry, product development managers, health professionals and academics with a research interest in the area.

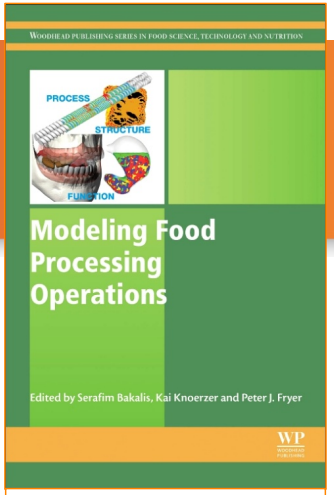
KEY FEATURES

- Building on volume 1, this title ensures that the area of EU health claims in food is comprehensively covered
- Chapters are devoted to individual food ingredients and substances, covering the range of issues related to health claims
- Health-promoting products are an increasing consumer trend in product development and this book provides key information on these advances

DESCRIPTION

The second volume of *Foods, nutrients and food ingredients with authorised EU health claims* continues from *Volume 1*, which provided a comprehensive overview of many of the permitted health claims for foods and nutrients approved under European Regulation EC 1924/2006. This new volume discusses more of the health claims authorised to date for use in the EU. The chapters cover details of various permitted claims, such as the approved wording, conditions of use, the target group for the claims, the evidence for the claimed health benefits, and where appropriate details of other relevant legislation, consumer-related issues and future trends.

The book opens with an overview of regulatory developments relating to health claims. Part One reviews authorised disease risk reduction claims and proprietary claims. The second part investigates ingredients with permitted 'general function' claims, with chapters examining ingredients such as red yeast rice, glucomannan and guar gum. The final section of the book explores foods and nutrients with permitted health claims, including chapters on authorised EU health claims for prunes, foods with low or reduced sodium or saturated fatty acids, and claims for essential and long chain polyunsaturated fatty acids.



Modeling Food Processing Operations

Edited by: ***Serafim Bakalis*** Professor, School of Chemical Engineering, University of Birmingham, UK
Kai Knoerzer Research Project Leader, CSIRO, Australia
Peter J Fryer Professor of Chemical Engineering, School of Chemical Engineering, University of Birmingham, UK

WP WOODHEAD PUBLISHING

A comprehensive overview of the applications of modeling in conventional food processing

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-284-6
PUB DATE: April 2015
FORMAT: Hardback
PAGES: c. 348

AUDIENCE

Food engineers, research and development managers in food processing and manufacturing, and academics and postgraduate students with a research interest in this area.

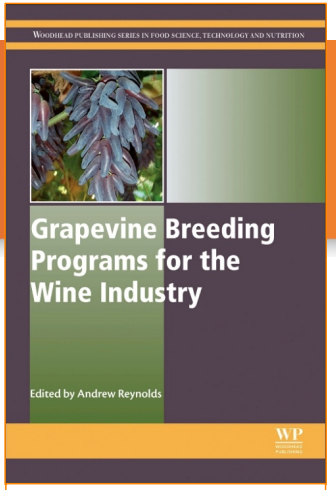
KEY FEATURES

- Comprehensively reviews the various applications of modeling in conventional food processing
- Examines the modeling of multiphase unit operations and various food processes involving heating and cooling
- Analyzes the models used to optimize food distribution

DESCRIPTION

Computational modeling is an important tool for understanding and improving food processing and manufacturing. It is used for many different purposes, including process design and process optimization. However, modeling goes beyond the process and can include applications to understand and optimize food storage and the food supply chain, and to perform a life cycle analysis. *Modeling Food Processing Operations* provides a comprehensive overview of the various applications of modeling in conventional food processing. The needs of industry, current practices, and state-of-the-art technologies are examined, and case studies are provided.

Part One provides an introduction to the topic, with a particular focus on modeling and simulation strategies in food processing operations. Part Two reviews the modeling of various food processes involving heating and cooling. These processes include: thermal inactivation; sterilization and pasteurization; drying; baking; frying; and chilled and frozen food processing, storage and display. Part Three examines the modeling of multiphase unit operations such as membrane separation, extrusion processes and food digestion, and reviews models used to optimize food distribution.



Grapevine Breeding Programs for the Wine Industry

Edited by: ***A G Reynolds*** Brock University, Canada

Summarizes recent trends in grapevine breeding, in terms of research and practical programs

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Covers challenges faced by breeders
- Highlights grapevine breeding programs in different wine-producing countries
- Contributions from experts across the world's winemaking regions

DESCRIPTION

Grapevine Breeding Programs for the Wine Industry: Traditional and Molecular Techniques summarizes recent trends in grapevine breeding, both in terms of research and practical programs. The first group of chapters covers the challenges faced by breeders and existing and emerging techniques used to combat them. Two further groups of chapters focus on grapevine breeding programs in different wine-producing countries around the world. With authoritative contributions from experts across the world's winemaking regions, this book will be an essential reference for all those involved in viticulture and oeneology wanting to explore new methods, understand different approaches and refine existing practices.

ISBN: 978-1-78242-075-0

PUB DATE: April 2015

FORMAT: Hardback

PAGES: c. 440

AUDIENCE

Grapevine breeders, wine industry R&D managers, academic researchers and postgraduate students in grapevine breeding and wine science.

Global Legislation for Food Contact Materials

Edited by: ***J S Baughan*** Keller and Heckman LLP, USA

WP WOODHEAD PUBLISHING

An expert's global guide to food contact legislation

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Includes global coverage of food contact legislation
- Features expert analysis of future trends in global food packaging regulation
- Focus on specific materials such as plastic, paper and rubber materials in contact with food

DESCRIPTION

Food contact materials such as packaging, storage containers and processing surfaces can pose a substantial hazard to both food manufacturer and consumer due to the migration of chemicals or other substances from the material to the food, which can cause tainting of flavours and other sensory characteristics, or even illness. This book reviews the main materials used for food contact in terms of the global legislation in place to ensure their safe and effective use. Part One provides an overview of food contact legislation issues such as chemical migration and compliance testing. Part Two looks in detail at the legislation for specific food contact materials and their advantages, hazards and use in industry.

ISBN: 978-1-78242-014-9

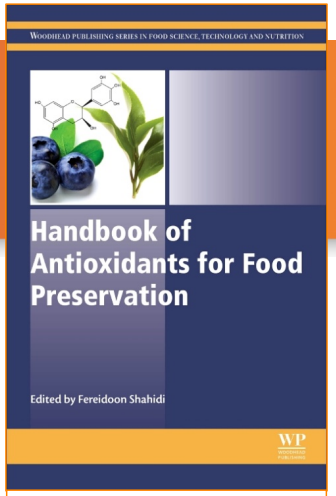
PUB DATE: April 2015

FORMAT: Hardback

PAGES: c. 216

AUDIENCE

R&D managers and safety assessment/quality control managers in food and beverage packaging; equipment manufacturers and food processors. Legal staff in food industry and academics with a research interest in this area



Handbook of Antioxidants for Food Preservation

Edited by: ***F Shahidi*** University Research Professor, Department of Biochemistry, Memorial University of Newfoundland, Canada

A comprehensive overview of currently available food antioxidants and their applications in different food products

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-1-78242-089-7

PUB DATE: February 2015

FORMAT: Hardback

PAGES: c. 488

AUDIENCE

R&D and product development managers working with lipid ingredients, short shelf-life products and preservatives. Academics and postgraduate students with a research interest in this field.

KEY FEATURES

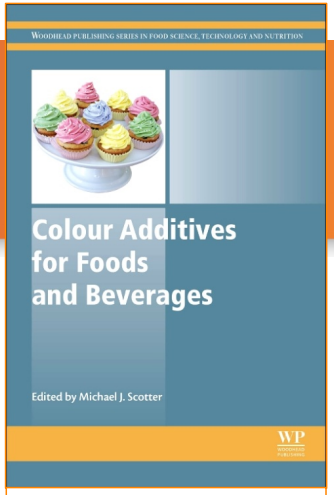
- Reviews the various types of antioxidants used in food preservation, including chapters on tea extracts, natural plant extracts and synthetic phenolics
- Analyses the performance of antixoxidants in different food systems
- Compiles significant international research and advancements

DESCRIPTION

Lipid oxidation in food leads to rancidity, which compromises the sensory properties of food and makes it unappealing to consumers. The growing trend towards natural additives and preservatives means that new antioxidants are emerging for use in foods. This book provides an overview of the food antioxidants currently available and their applications in different food products. Part one provides background information on a comprehensive list of the main natural and synthetic antioxidants used in food. Part two looks at methodologies for using antioxidants in food, focusing on the efficacy of antioxidants. Part three covers the main food commodities in which antioxidants are used.

FOOD SCIENCE, TECHNOLOGY & NUTRITION

Please contact your Elsevier Sales or Customer Service Representative



Colour Additives for Foods and Beverages

Edited by: ***M Scotter*** Fera, UK

WP WOODHEAD PUBLISHING

This exciting book gives detailed coverage of emerging research in food colour additives to satisfy increasing consumer demand for natural and safer synthetic colours

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

KEY FEATURES

- Reviews the natural and synthetic colour additives available for foods and beverages, looking at their properties and applications as well as regulatory, sensory and analytical issues
- Expert analysis of natural origin colours, synthetic origin colours, overview of regulations, safety analysis and consumer health
- Comprehensive coverage of properties and development in food colours: chemical purity, colour stability, and consumer sensory perception

DESCRIPTION

Food colour additives have been the focus of much research in the last few years, and there is increasing consumer demand for natural and safer synthetic colours. This book reviews the natural and synthetic colours available, their properties and applications, as well as regulatory, sensory and analytical issues. Part one covers the development and safety of food colour additives. Part two covers properties and methods of analysis, and part three focuses on specific food product applications and future trends.

ISBN: 978-1-78242-011-8

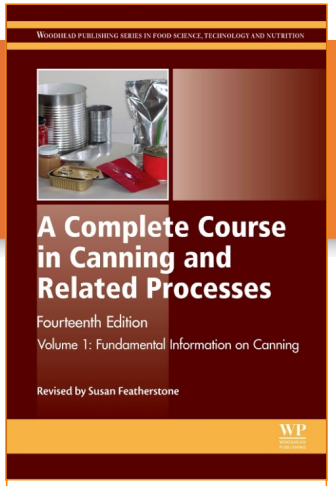
PUB DATE: February 2015

FORMAT: Hardback

PAGES: c. 232

AUDIENCE

R&D managers and consultants in the food industry working with colour development and application, academics and postgraduate students with a research interest in the area



A Complete Course in Canning and Related Processes, 14e

Volume 1 Fundemental Information on Canning

Edited by: ***S Featherstone*** Manager, Food and Beverage Technology Lab, Nampak, South Africa

The first volume of this indispensable three book series is an authoritative guide on canning, including invaluable information on planning, regulations, quality control, and the operations involved in the processing and canning of ingredients

A Volume in the Woodhead Publishing Series in Food Science, Technology and Nutrition.

ISBN: 978-0-85709-677-7

PUB DATE: February 2015

FORMAT: Hardback

PAGES: c. 358

AUDIENCE

R&D professionals, QA/QC professionals and managers in the canning industry and food microbiologists and engineers with an interest in thermal processing

KEY FEATURES

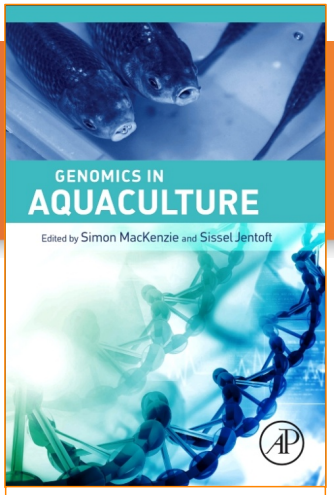
- Continues the tradition of the series that has educated professionals and students for over 100 years
- Covers all aspects of the canning process, including planning, processing, storage, and control
- Analyzes worldwide food regulations, standards, and food labeling
- Incorporates processing operations, plant location, and sanitation

DESCRIPTION

A Complete Course in Canning and Related Processes, Fourteenth Edition: Fundamental Information on Canning provides readers with a complete course on canning.

This latest edition continues the tradition for both professionals in the canning industry and students who have benefitted from this collection for over 100 years. It contains extensively revised and expanded coverage, and the three-title set is designed to cover all phases of the canning process, including planning, processing, storage, and quality control.

Major changes for the new edition include new chapters on regulation and labeling that contrast the situation in different regions worldwide, updated information on containers for canned foods, and new information on validation and optimization of canning processes, among other topics.



Genomics in Aquaculture

Edited by: ***Simon A MacKenzie*** Senior Lecturer, Marine Biotechnology, Institute of Aquaculture, University of Stirling, UK
Sissel Jentoft University of Oslo, Norway

This robust yet concise reference offers practical guidance on the latest advances in the rapidly growing field of aquaculture genomics, providing the latest scientific methods and technologies used to maximize efficient production of healthy fish, such as genome sequencing, transcriptomics, and proteomics

ISBN: 978-0-12-801418-9
PUB DATE: June 2016
FORMAT: Paperback
PAGES: c. 340

AUDIENCE

Aquaculture industry researchers and scientists and associated industries (pharma, health/nutrition etc.), Students across disciplines of biology, veterinary sciences, biotechnology, animal science & marine biology

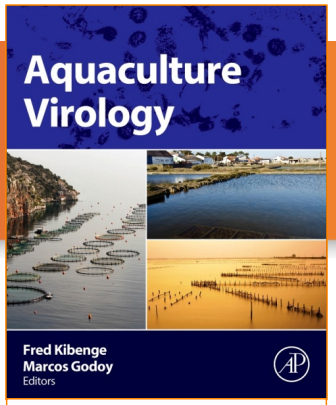
KEY FEATURES

- Provides the latest scientific methods and technologies to maximize efficiencies for healthy fish production, with summary tables for quick reference
- Offers an extended glossary of technical and methodological terms to help readers better understand key biological concepts
- Describes state-of-the-art technologies, such as transcriptomics and epigenomics, currently under development for future perspective of the field
- Covers minority species that have a specific biological interest (e.g., Pleuronectiformes), making the book useful to countries developing such species

DESCRIPTION

Genomics in Aquaculture is a concise, must-have reference that describes current advances within the field of genomics and their applications to aquaculture. Written in an accessible manner for anyone—non-specialists to experts alike—this book provides in-depth coverage of genomics spanning from genome sequencing, to transcriptomics and proteomics. It provides, for ease of learning, examples from key species most relevant to current intensive aquaculture practice.

Its coverage of minority species that have a specific biological interest (e.g., Pleuronectiformes) makes this book useful for countries that are developing such species. It is a robust, practical resource that covers foundational, functional, and applied aspects of genomics in aquaculture, presenting the most current information in a field of research that is rapidly growing.



Aquaculture Virology

Edited by: ***Fred Kibenge*** Professor of Virology, Department of Pathology and Microbiology, Atlantic Veterinary College, University of Prince Edward Island, Canada
Marcos Godoy Dr. Director of Biological Sciences, University of Chile, Puero Montt, Chile

This comprehensive book examines the main virus families and diseases relevant to aquaculture—including detailed discussions of specific diseases—in a systematic and succinct format

ISBN: 978-0-12-801573-5
PUB DATE: June 2016
FORMAT: Paperback
PAGES: c. 440

AUDIENCE

Aquaculture Practitioners in the prevention and control of viral aquaculture diseases. Aquaculture industry researchers and scientists and associated industries (pharma, health/nutrition etc), Students across disciplines in aquaculture, comparative virology, biology, veterinary sciences, biotechnology, animal science & marine biology

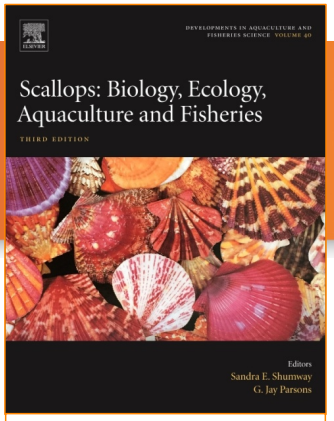
KEY FEATURES

- Provides important and practical insights into achievable agricultural options via case studies
- Addresses the use of natural resources, technological advances, and management systems to create viable, adaptive economic growth
- Applies lessons learned in Brazil to improving both economic and ecological resource-sustainable agriculture for other regions and countries
- Serves as an essential resource for the aquaculture researcher, student, and teacher, and a practical companion for clinical veterinarians, aquaculture disease practitioners, and farmers.

DESCRIPTION

Aquaculture Virology covers the latest information on the main virus families and diseases relevant to aquaculture, along with detailed discussions of specific diseases, all delivered in a systematic and succinct format. This book is an essential resource for the aquaculture researcher, student, and teacher. Descriptions of each disease include disease name, structure, and the composition of each virus, classification and virus replication, epidemiology, pathology and immunity, diagnostic methods (gross pathology, histopathology, cell culture, PCR, sequencing, ELISA, etc.), and prevention and control of each disease. The book is ideal for clinical veterinarians, aquaculture disease practitioners, farmers, and those interested in aquatic virology.

LIFE SCIENCES
AQUACULTURE
Please contact your Elsevier Sales or Customer Service Representative



Scallops, 3e

Biology, Ecology, Aquaculture and Fisheries

Edited by: ***Sandra E. Shumway*** Department of Marine Sciences, University of Connecticut, Groton, CT, USA
G. Jay Parsons Aquaculture Science Branch, Fisheries and Oceans Canada, Ottawa, ON, Canada

ISBN: 978-0-444-62710-0
PREVIOUS EDITION ISBN: 978-0-444-50482-1
PUB DATE: March 2016
FORMAT: Hardback
PAGES: c. 1162

AUDIENCE

Fisheries, marine biologists, and researchers studying shellfish and the ocean environment

This third edition of this well-respected book on scallops discusses all facets of scallop biology, including anatomy, taxonomy, physiology, ecology, larval biology, and neurobiology, giving users an update on the most recent advancements on one of the fastest growing animal food producing sectors in the world

A Volume in the Developments in Aquaculture and Fisheries Science Series.

KEY FEATURES

- Offers 30 detailed chapters on the development and ecology of scallops
- Provides chapters on various cultures of scallops in China, Japan, Scandinavia, Europe, Eastern North America, and Western North America
- Includes details of scallop reproduction, nervous system, and behavior, genetics, diseases, parasites, and much more
- Completely updated edition with valuable information on one of the most widely distributed shellfish in the world

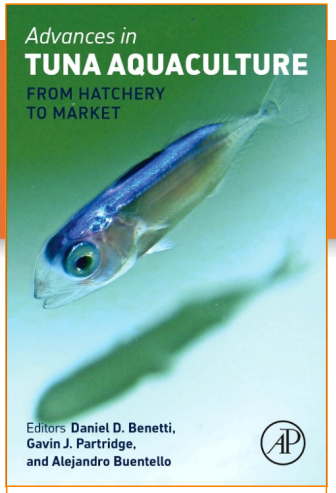
DESCRIPTION

Scallops: Biology, Ecology, Aquaculture and Fisheries, Third Edition, continues its history as the definitive resource on scallops, covering all facets of scallop biology, including anatomy, taxonomy, physiology, ecology, larval biology, and neurobiology.

More than thirty extensive chapters explore both fisheries and aquaculture for all species of scallops in all countries where they are fished or cultured.

This treatise has been updated to include the most recent advances in research and the newest developments within the industry. As aquaculture remains one of the fastest-growing animal food-producing sectors, this reference becomes even more vital. It has all the available information on scallops needed to equip researchers to deal with the unique global issues in the field.

LIFE SCIENCES
AQUACULTURE
Please contact your Elsevier Sales or Customer Service Representative



Advances in Tuna Aquaculture

From Hatchery to Market

Edited by: ***Daniel Benetti*** Professor and Director of Aquaculture, University of Miami, Miami, Florida, USA; ***Gavin Partridge*** Principal Research Scientist, Australian Centre for Applied Aquaculture Research, Challenger Institute of Technology, Western Australia; ***Alejandro Buentello*** Adjunct Professor Texas A&M University--Department of Wildlife and Fisheries Sciences; Iowa State University--Department of Natural Resource Ecology and Management; University of Maryland Baltimore County--Department of Marine Biotechnology, USA

This book provides a solid reference that explores the tuna culture and advanced technologies for hatchery and sustainable aquaculture development, and includes the advantages and challenges of finfish farming in specific regions throughout the world. Users will find information on the latest scientific methods and technologies to maximize efficiencies and production.

ISBN: 978-0-12-411459-3

PUB DATE: December 2015

FORMAT: Hardback

PAGES: c. 362

AUDIENCE

Researchers, professionals, and students of aquaculture, marine biologists, fisheries, policy makers, etc. and anyone working in sustainable seafood

KEY FEATURES

- Incorporates and reviews the most recent information on tuna fisheries and aquaculture
- Presents the most innovative production technologies in tuna aquaculture, from hatchery to market
- Includes important information on tuna, derived from industry experience and academic research on larval rearing technology and grow out operations
- Encompasses and discusses key topics such as genetics, diseases, nutrition, endocrinology, and reproduction, as well as developments, challenges, and future opportunities in tuna aquaculture
- Provides the latest scientific methods and technologies to maximize efficiencies and production
- Presents the independent and collective assessments, viewpoints, and visions of various scientists, all internationally recognized as authorities in the field

DESCRIPTION

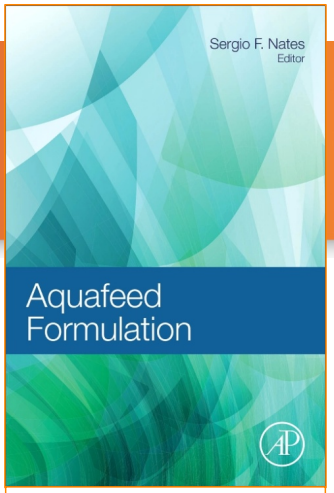
Advances in Tuna Aquaculture: From Hatchery to Market provides detailed overviews on the current status of tuna fisheries, fattening, and farming practices, as well as advances in closed-cycle tuna aquaculture. Contributors are renowned scientists, internationally recognized as authorities in their fields. This book addresses all basic and applied aspects of tuna aquaculture, presenting and discussing the global status of tuna fisheries, reproduction, broodstock management, spawning, larval rearing and early developmental stages including nursery and grow out methods. It presents incorporates the most comprehensive and updated data, statistics, and trends in tuna fisheries and aquaculture, covering and addresses a variety of topics ranging fromfrom endocrinology, nutrition, diseases, and genetics to economics and markets. It covers describes recent up-to-date progress on tuna aquaculture and hatchery development. It also provides a synopsisn overview of the challenges presently confronted by tuna aquaculturists,facing tuna aquaculture and and offers innovative views on the challengesbottle-neck issues faced by the industry with the current shift from fisheries to fattening to closed-cycle aquaculture.

This is the first book to encompass all aspects related to the tuna aquaculture industry, and merges them into a state-of-the-art compendium that will serve as seminal reference for students, researchers, and professionals working with tuna biology, fisheries, and aquaculture worldwide.

LIFE SCIENCES

AQUACULTURE

Please contact your Elsevier Sales or Customer Service Representative



Aquafeed Formulation

Edited by: ***Sergio F Nates*** Sergio F. Nates, President, ALAPRE, USA

A practical approach to aquafeed research and fish production, from relevant software and feed nutrients to additives such as enzymes and phytase and conjugated fatty acids

ISBN: 978-0-12-800873-7

PUB DATE: October 2015

FORMAT: Hardback

PAGES: c. 280

AUDIENCE

Researchers and Scientists in Aquatic Fields; Aquatic Biology, Marine Biology Animal Nutrition and Animal Science as well as students in those fields.

KEY FEATURES

- Includes the latest software evaluation for calculating protein and amino acid sources, trace minerals, and vitamins for aquaculture diets
- Provides essential information on formulation, covering feed nutrients and additives such as enzymes and phytase and conjugated fatty acids
- Presents factors affecting nutrient recommendations for aquaculture diets and nutritional effects on aquaculture nutrient excretion and water quality
- Covers a broad range of techniques to understand the nutrient recommendations in the NRC guide

DESCRIPTION

Aquafeed Formulation is the only resource that provides summaries with examples and formulation techniques specifically to meet the needs of anyone in the aquaculture industry.

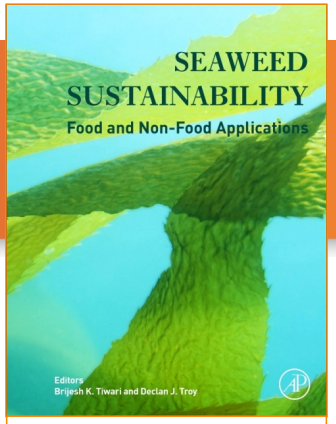
As feed is the largest single cost item in aquaculture production, and formulating aquaculture feed requires many combinations of several ingredients and nutrient requirements, this book takes a clear-and -concise approach, providing essential information on formulation and covering relevant available software, feed nutrients, and additives such as enzymes and phytase and conjugated fatty acids, as well as best industry practices to improve aquafeed production.

Users will find this to be a one-stop resource for anyone interested or involved in, the global aquaculture industry.

LIFE SCIENCES

AQUACULTURE

Please contact your Elsevier Sales or Customer Service Representative



Seaweed Sustainability

Food and Non-Food Applications

Edited by: ***Brijesh K. Tiwari*** Teagasc Food Research Centre, Dublin, Ireland
Declan Troy Teagasc Food Research Centre, Dublin, Ireland

A comprehensive account of diversified applications and benefits of seaweed in the global food supply

ISBN: 978-0-12-418697-2
PUB DATE: September 2015
FORMAT: Hardback
PAGES: c. 456

AUDIENCE

Wide range of industries including research institutions and universities active in the areas of food science; food and feed companies; seaweed research centers; food engineering; Marine and Aquatic Bio, Plant Engineering

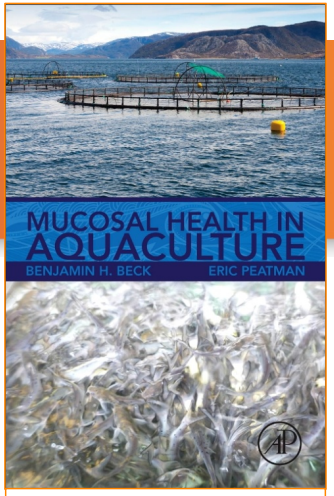
KEY FEATURES

- Offers different perspectives by presenting examples of commercial utilization of wild-harvested or cultivated algae, marine and freshwater seaweeds
- Discusses seasonal and cultivar variations in seaweeds for a better understanding of their implications in commercial applications
- Includes a wide range of micro and macro algae for food and feed production and provides perspectives on seaweed as a potential energy source

DESCRIPTION

Seaweed Sustainability: Food and Non-Food Applications is the only evidence-based resource that offers an abundance of information on the applications of seaweed as a solution to meet an increasing global demand for sustainable food source.

The book uncovers seaweed potential and describes the various sources of seaweed, the role of seaweeds as a sustainable source for human food and animal feeds, and the role of seaweed farming for sustainability. In addition to harvesting and processing information, the book discusses the benefits of seaweed in human nutrition and its nutraceutical properties.



Mucosal Health in Aquaculture

Benjamin H. Beck Research Physiologist, Stuttgart National Aquaculture Research Center, Stuttgart, AR, USA
Eric Peatman Assistant Professor, Department of Fisheries and Allied Aquacultures,Auburn University, AL, USA

A solid reference to understanding fish and shellfish health to improve sustainable aquaculture development

"Topics include detailed examinations of key mucosal tissues, environmental and nutritional impacts, mucosal vaccines… recommended for anyone specializing in aquatic animal health."--**Aquaculture Magazine, *Mucosal Health in Aquaculture***

"…the latest scientific methods and technologies to maximize efficiencies for the health of farmed fish production…includes case studies of research to show the importance of the integrated health of the mucosa approach."--**Aquahoy, *Mucosal Health in Aquaculture***

ISBN: 978-0-12-417186-2
PUB DATE: February 2015
FORMAT: Hardback
PAGES: c. 396

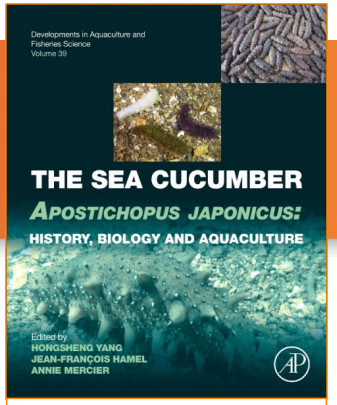
AUDIENCE
Researchers, professionals, and graduate students of aquaculture, those studying aquaculture disease and genetic improvement to improve fish culture to avoid disease problems.

KEY FEATURES

- Includes research case studies to exhibit the importance of various integrated approaches to mucosal health
- Examines the latest scientific methods and technologies to maximize efficiencies for healthy fish production for farming
- Brings together the latest knowledge and research on mucosal barriers and mechanisms from world-wide experts in mucosal health
- Utilizes detailed diagrams and figures to enhance comprehension

DESCRIPTION
Mucosal Health in Aquaculture is an essential reference on mucosal health for the diverse aquaculture community. Rich in explanatory figures and schematics, the book includes important concepts such as structural and cellular composition of mucosal surfaces in fish and shellfish, known functional roles of molecular and cellular actors during pathogen invasion, impacts of nutrition on the mucosal barriers, impacts of chemical treatments on mucosal surfaces, mucosal vaccines and vaccination strategies, and more.

The health of cultured aquaculture species is critical in establishing the sustainable growth of the aquaculture industry worldwide, and mucosal health is of particular interest to those working in aquaculture because mucosal surfaces (skin, gill, intestine, reproductive tissues) constitute the first line of defense against pathogen invasion. *Mucosal Health in Aquaculture* captures the latest research on mucosal barriers in aquaculture species and their impacts on nutrition and immunity to ensure sustainable aquaculture development.



The Sea Cucumber Apostichopus japonicus

History, Biology and Aquaculture

Edited by: ***Hongsheng Yang*** Deputy Director, Institute of Oceanology, Chinese Academy of Sciences, Qingdao, P.R. China
Jean-Francois Hamel Researcher/Consultant, Society for the Exploration and Valuing of the Environment (SEVE), Newfoundland and Labrador, Canada
Annie Mercier Associate Professor, Ocean Sciences Centre, Memorial University, Newfoundland and Labrador, Canada

Detailed coverage of the biology and ecology of *Apostichopus japonicus* for the advancement of sea cucumber aquaculture and management worldwide

A Volume in the Developments in Aquaculture and Fisheries Science Series.

"...an important source of information on biology, culture techniques, and also markets and trade...recommended for anyone working with sea cucumber aquaculture..."--**Aquaculture Magazine, *The Sea Cucumber Apostichopus japonicus***

ISBN: 978-0-12-799953-1
PUB DATE: January 2015
FORMAT: Hardback
PAGES: c. 454

AUDIENCE

Aquaculture scientists and extension agents, environmental biologists, aquatic scientists, graduate students, government officials and policy-makers, and aquaculture practitioners

KEY FEATURES

- Explores the historical and current importance of *Apostichopus japonicus* in China, Japan, and the two Koreas
- Presents innovative production technologies in sea cucumber aquaculture
- Provides the latest scientific methods to maximize efficiency and production
- Includes important information on the design and operation of farms
- Discusses hot topics, current challenges, and future opportunities in aquaculture
- Highlights important advances in the study of sea cucumbers at the behavioral, cellular, and molecular levels

DESCRIPTION

While sea cucumber is one of China's and Asia's most prized seafoods, and aquaculture programs are being developed on a huge commercial scale, Chinese expertise and knowledge in this area has not been well disseminated worldwide. *The Sea Cucumber Apostichopus japonicus* is the first book to bridge this gap by compiling key information related to hatchery and aquaculture techniques, nutritional and medical values, markets, and trade flow of the number one sea cucumber species. It summarizes the historical and most recent developments in the trade and aquaculture of *Apostichopus japonicus*, as well as important aspects of its anatomy, population dynamics, reproduction, development, physiology, and biochemistry.

With sea cucumber harvest and aquaculture booming worldwide, comprehensive knowledge of China's technological breakthroughs in this rapidly expanding field is key. *The Sea Cucumber Apostichopus japonicus* is essential to understanding the cultural underpinnings of the insatiable market demands for sea cucumber and what drives sea cucumber trade. It also provides biological information and aquaculture techniques that can be adapted to other species, making it a valuable resource for researchers and practitioners involved in sea cucumber harvesting, aquaculture, and conservation.

Modeling in Food Microbiology

From Predictive Microbiology to Exposure Assessment

Membré Jeanne-Marie The French National Institute for Agricultural Research, Nantes, France
Valdramidis Vasilis University of Leuven, Leuven, Belgium

A review of existing terminology of Predictive Microbiology and exposure assessment, with featured examples of applying these tools along the food chain

KEY FEATURES

- Features an extensive review of modelling terminology
- Presents examples of all available microbial models (i.e., growth, inactivation, growth/no growth) and applicable software
- Revisits all statistical aspects related to exposure assessment
- Describes realistic examples of implementing microbial spoilage and safety modeling approaches

DESCRIPTION

Predictive microbiology primarily deals with the quantitative assessment of microbial responses at a macroscopic or microscopic level, but also involves the estimation of how likely an individual or population is to be exposed to a microbial hazard.

This book provides an overview of the major literature in the area of predictive microbiology, with a special focus on food. The authors tackle issues related to modeling approaches and their applications in both microbial spoilage and safety.

Food spoilage is presented through applications of best-before-date determination and commercial sterility. Food safety is presented through applications of risk-based safety management. The different modeling aspects are introduced through probabilistic and stochastic approaches, including model and data uncertainty, but also biological variability.

ISBN: 978-1-78548-155-0
PUB DATE: February 2016
FORMAT: Hardback
PAGES: c. 88

AUDIENCE

Stakeholders, industry professionals, researchers and academics in the field of food technology, food science and food microbiology, biosystems engineering and chemical engineering

Physical-Chemical Properties of Foods

New Tools for Prediction

Musavu Ndob Aïchatou Université Blaise Pascal - Institut Pascal, France
Melas Malik Université Blaise Pascal - Institut Pascal, France
André Lebert Université Blaise Pascal - Institut Pascal, France

A thermodynamic approach, developed to predict microbial, biochemical and organoleptic properties from the formulation of foods

KEY FEATURES

- Describes the construction of a tool to allow you to predict the physical-chemical properties of foods and bacterial broths
- Shows you how to apply this tool with complex medias to predict water activity and pH levels and how to integrate this tool with a process simulator
- Full with theoretical equations and examples to help you apply the content to your data

DESCRIPTION

The physical and chemical properties of food products have central roles in biotechnology and the pharmaceutical and food industries. Understanding these properties is essential for engineers and scientists to tackle the numerous issues in food processing, including preservation, storage, distribution and consumption.

This book discusses models to predict some of the physical-chemical properties (pH, aw and ionic strength) for biological media containing various solutes. In recent years, food production has involved less processing and fewer additives or preservatives. If health benefits for consumers are obvious, it is not only necessary to adapt current processing and preservation processes but also to verify that appropriate technological and health properties are preserved.

The authors present established models, but also introduce new tools for prediction with modeling methods that are part of a more general approach to understand the behavior of fluid mixtures and design new products or processes through numerical simulation.

ISBN: 978-1-78548-007-2
PUB DATE: September 2015
FORMAT: Paperback
PAGES: c. 98

AUDIENCE

Food scientists, food engineers, postgraduate students of food sciences

LIFE SCIENCES

ISTE

Please contact your Elsevier Sales or Customer Service Representative

Dimensional Analysis of Food Processes

Guillaume Delaplace Research Director in the Department of Science and Process Engineering of Agricultural Products at INRA in Lille, France
Karine Loubière CNRS Research Scientist at the University of Toulouse, France.
Fabrice Ducept Assistant Professor, AgroParisTech, France
Romain Jeantet Professor, Agrocampus Ouest, INRA, Rennes, France

ISBN: 978-1-78548-040-9
PUB DATE: September 2015
FORMAT: Hardback
PAGES: c. 338

AUDIENCE

Academics, undergraduate and graduate students of food science/food process engineering and food engineering; professionals in food and process engineering

Presenting a powerful tool in food engineering

KEY FEATURES

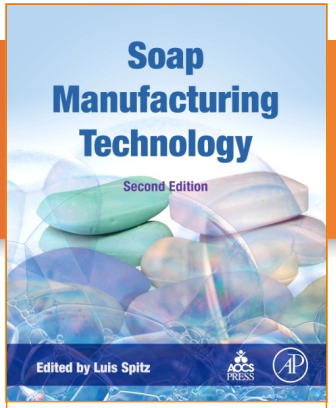
- Discusses popular dimensional analysis for knowledge and scaling-up tools with detailed case studies
- Emphasises the processes dealing with complex materials of a multiphase nature
- Introduces the concept of chemical or material similarity and a framework for analysis of the functional forms of the propoerty

DESCRIPTION

This book deals with the modeling of food processing using dimensional analysis. When coupled to experiments and to the theory of similarity, dimensional analysis is indeed a generic, powerful and rigorous tool making it possible to understand and model complex processes for design, scale-up and /or optimization purposes.

This book presents the theoretical basis of dimensional analysis with a step by step detail of the framework for applying dimensional analysis, with chapters respectively dedicated to the extension of dimensional analysis to changing physical properties and to the use of dimensional analysis as a tool for scaling-up processes. It includes several original examples issued from the research works of the authors in the food engineering field, illustrating the conceptual approaches presented and strengthen the teaching of all.

LIFE SCIENCES
ISTE
Please contact your Elsevier Sales or Customer Service Representative



Soap Manufacturing Technology, 2e

Edited by: ***Luis Spitz*** L. Spitz Inc., Highland Park, Illinois, USA

ELSEVIER

This second edition is the most authoritative and comprehensive title on soap manufacturing available today, including details on formulation, performance evaluation, integrated saponification and drying systems, cleansing systems, laundry bars, and more

ISBN: 978-1-63067-065-8

PREVIOUS EDITION ISBN: 9781893997615

PUB DATE: November 2016

FORMAT: Hardback

PAGES: c. 18

AUDIENCE

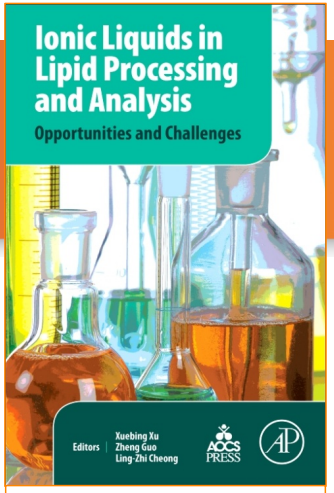
soap producers, soap suppliers, home and personal care research and development, cosmetic chemists

KEY FEATURES

- Includes new and figures, tables, and text updated from the first edition
- Serves as a technical reference book ideal for both experienced and beginning soap producers and suppliers
- Provides an overview of the AOCS methods used for the evaluation of soap and soap products
- Includes two new chapters on Integrated Saponification and Drying Systems and Laundry Bars

DESCRIPTION

Soap Manufacturing Technology, Second Edition, is the most authoritative and up-to-date book on soap technology available today. Editor and contributing author Luis Spitz leads a world-renowned team in providing comprehensive information on all components of soap manufacturing including formulation, performance evaluation, cleansing systems, and more. This new edition includes two new chapters, Integrated Saponification and Drying Systems and Laundry Bars, and the others are completely revised and updated.



Ionic Liquids in Lipid Processing and Analysis

Opportunities and Challenges

Edited by: ***Xuebing Xu*** Wilmar Global Research and Development Center, Shanghai, China
Zheng Guo Department of Engineering, Aarhus University, Aarhus, Denmark
Ling-Zhi Cheong Wilmar Global Research and Development Center, Shanghai, China; Department of Food Science, School of Marine Science, Ningbo University, China

ELSEVIER

Stimulate interest in the tremendous opportunity and challenges from ionic liquids as a newly emerging technology for the lipids processing area

KEY FEATURES

- Reviews the state-of-the-art applications of ionic liquids in lipid processing and relevant areas from a variety of perspectives
- Summarizes the latest advances in the measurement of the physical and chemical properties of ionic liquids and available databases of thermodynamic property datapoints
- Presents the tremendous opportunities provided and challenges faced from ionic liquids as a newly emerging technology for lipids processing area

DESCRIPTION

This book serves as a reference for those interested in state-of-the-art research on the science and technology of ionic liquids (ILs), particularly in relation to lipids processing and analysis. Topics include a review of the chemistry and physics of ILs as well as a quantitative understanding of structure-activity relationships at the molecular level. Further, chapter authors examine the molecular basis of the toxicity of ILs, the prediction of the properties of ILs, and the rationale and steps toward a priori design of ionic liquids for task-defined applications.

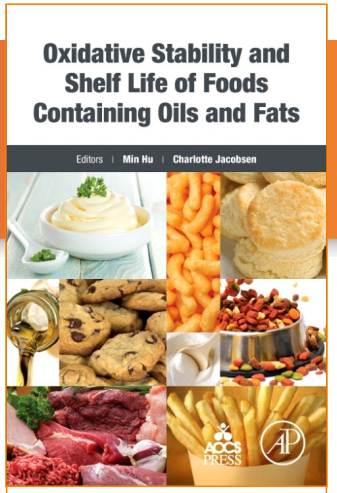
Emerging research in developing lipid-inspired ILs and their prospective use in drug formulation is described. Among the highlights are the latest advances in IL-mediated biocatalysis and biotransformation, along with lipase production, purification, and activation.

ISBN: 978-1-63067-047-4
PUB DATE: February 2016
FORMAT: Hardback
PAGES: c. 470

AUDIENCE

researchers in biotechnology, biocatalysis, industrial oil products, and green solvent use, chemists, chemical engineers

LIFE SCIENCES
OIL CHEMISTRY
Please contact your Elsevier Sales or Customer Service Representative



Oxidative Stability and Shelf Life of Foods Containing Oils and Fats

Edited by: ***Min Hu*** Senior Application Scientist, DuPont Nutrition & Health, New Century, KS, USA
Charlotte Jacobsen Professor, National Food Institute, Technical University of Denmark, Lyngby, Denmark

ISBN: 978-1-63067-056-6
PUB DATE: January 2016
FORMAT: Hardback
PAGES: c. 528

AUDIENCE

Members of the pet and food industries, students, researchers, and professors from universities and research institutes

Presents an evaluation of methods on the oxidative stability and shelf life of bulk oils/fats, fried oils and foods, food emulsions, dried foods, meat and meat products, and seafood

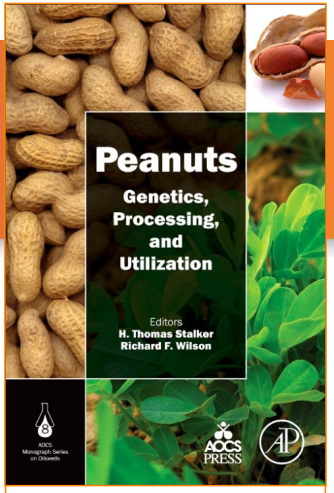
KEY FEATURES

- Focuses on the application of various evaluation methods to studies of oxidative stability and shelf life in oils and fats and oils and fats-containing foods in the food and pet food industries
- Discusses oxidative stability and shelf life of low-moisture (dry) food, including dry pet food
- Discusses lipid co-oxidation with protein because a number of food products contain both lipids and proteins
- Directed mainly toward readers working in the food and pet food industries

DESCRIPTION

Oxidative Stability and Shelf Life of Foods Containing Oils and Fats focuses on food stability and shelf life, both important factors in the improvement and development of food products. This book, relevant for professionals in the food and pet food industries, presents an evaluation of methods for studies on the oxidative stability and shelf life of bulk oils/fats, fried oils and foods, food emulsions, dried foods, meat and meat products, and seafood in food and pet food.

LIFE SCIENCES
OIL CHEMISTRY
Please contact your Elsevier Sales or Customer Service Representative



Peanuts

Genetics, Processing, and Utilization

Edited by: ***Thomas Stalker*** Crop Science Department, North Carolina State University, Raleigh, NC, USA
Richard Wilson The Peanut Foundation, Oilseed & Bioscience Consulting, Raleigh, NC, USA

ELSEVIER

A presentation of the latest innovations in crop productivity, processing, and food manufacturing technologies, with tactics to help ensure global food security and high quality peanut products and a focus on market environments driven by consumer perception, legislation, and governmental policy

ISBN: 978-1-63067-038-2
PUB DATE: January 2016
FORMAT: Hardback
PAGES: c. 478

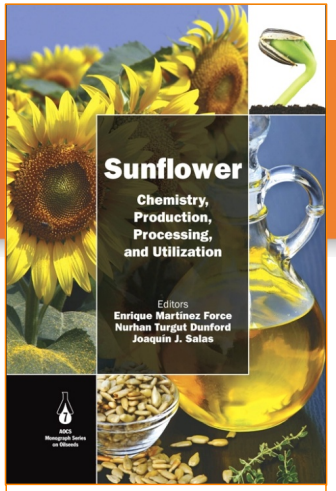
AUDIENCE
Oilseed breeders, genetic engineers, biologists, scholars and postgraduate students

KEY FEATURES

- Discusses modern breeding methods and genetically diverse resources for the development of agronomic varieties in the U.S., China, India, and West Central Africa
- Provides enhanced crop protection and quality through the application of information and genetic tools derived from analysis of the peanut genome sequence
- Includes state-of-art processing and manufacture of safe, nutritious, and flavorful food products

DESCRIPTION

Peanuts: Genetics, Processing, and Utilization (Oilseed Monograph) presents innovations in crop productivity and processing technologies that help ensure global food security and high quality peanut products. The authors cover three central themes, modern breeding methods for development of agronomic varieties in the U.S., China, West Central Africa, and India, enhanced crop protection and quality through information from the peanut genome sequence, and state-of-the-art processing and manufacturing of products in market environments driven by consumer perception, legislation, and governmental policy.



Sunflower

Chemistry, Production, Processing, and Utilization

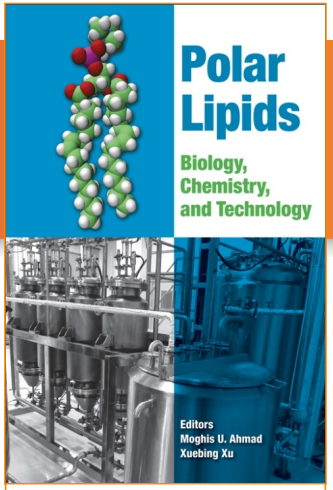
Edited by: ***Martinez-Force Enrique***
Nurhan T. Dunford
Joaquin J. Salas

ELSEVIER

ISBN: 978-1-893997-94-3
PUB DATE: April 2015
FORMAT: Hardback
PAGES: c. 700

DESCRIPTION

This comprehensive reference delivers key information on all aspects of sunflower. With over 20 chapters, this book provides an extensive review of the latest developments in sunflower genetics, breeding, processing, quality, and utilization; including food, energy and industrial bioproduct applications. World-renowned experts in this field review U.S. and international practices, production, and processing aspects of sunflower.



Polar Lipids

Biology, Chemistry, and Technology

Edited by: ***Moghis U. Ahmad*** Vice President, Chemical Technology & Manufacturing, Jina Pharmaceuticals Inc.
Xuebing Xu Wilmar Global Research and Development Center, Shanghai, China

ELSEVIER

A comprehensive reference book on the chemistry, biosynthesis, and processing technologies of polar lipids and their applications in food, nutrition, health, and medicine

ISBN: 978-1-63067-044-3
PUB DATE: April 2015
FORMAT: Hardback
PAGES: c. 550

AUDIENCE

food formulators, research and development scientists in food, nutrition, health, and disease fields, researchers in obesity and metabolism, health product/food manufacturers, analytical chemists in these industries

KEY FEATURES

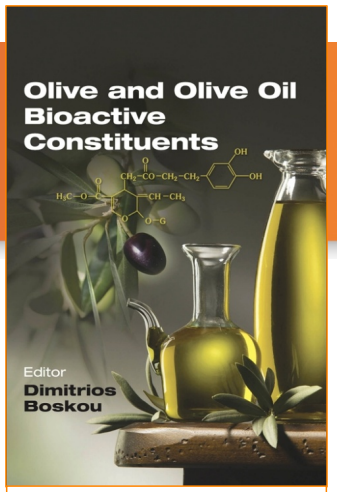
- Presents new and relatively unexplored polar lipids for researchers to consider to use in food and health applications
- Includes details on the chemistry and chemical synthesis, biosynthesis and biological effects, functional and nutritional properties, applications, and future trends of a variety of polar lipids
- Presents the latest analytical techniques for use in polar lipids research, including NMR and Supercritical Fluid Chromatography/Mass Spectrometry

DESCRIPTION

Polar Lipids is a valuable reference resource providing thorough and comprehensive coverage of different types of polar lipids known to lipid science and industry today. This book covers important applications and utilization of polar lipids, either in the area of food and nutrition, or health and disease.

Each chapter covers chemistry and chemical synthesis, biosynthesis and biological effects, functional and nutritional properties, applications, processing technologies, and future trends of a variety of polar lipids—including glycolipids, ether lipids, phenol lipids, serine phospholipids, omega-3 phospholipids, rice lecithin, palm lecithin, sunflower lecithin, sugar- and protein-based lipids, lysophospholipids,and more.

LIFE SCIENCES
OIL CHEMISTRY
Please contact your Elsevier Sales or Customer Service Representative



Olive and Olive Oil Bioactive Constituents

Edited by: ***Dimitrios Boskou*** Dimitrios Boskou, Professor Emeritus, School of Chemistry, Aristotle University, Thessaloniki, Hellas

ELSEVIER

Unravels the body of science pertaining to olive minor constituents in relation to new chemical knowledge, technological innovations and novel methods of recovery

ISBN: 978-1-63067-041-2

PUB DATE: April 2015

FORMAT: Hardback

PAGES: c. 400

AUDIENCE

food scientists, health and nutrition researchers, biochemists, olive oil growers and buyers

KEY FEATURES

- Presents detailed information concerning the claimed benefits of olive oil and discusses the permitted health claim to EFSA on oils with natural phenolics
- Recovery of bioactive constituents from olive waste is comprehensively described
- Explores the relationship betwen phenolic levels and sensory evaluation
- Features chapters on the clinical and cellular mechanisms and health effects of olive, important for functional foods research

DESCRIPTION

The market is flooded with products posing as elixirs, supplements, functional foods, and olive oil alternatives containing phenols obtained from multiple olive sources. This technically-oriented book will be of value to nutritionists and researchers in the biosciences. It unravels the body of science pertaining to olive minor constituents in relation to new chemical knowledge, technological innovations, and novel methods of recovery, parallel to toxicology, pharmacology, efficacy, doses, claims, and regulation.

Topics include: the biological importance of bioactive compounds present in olive products; developments and innovations to preserve the level of bioactives in table olives and olive oil; and importance of variety, maturity, processing of olives, storage, debittering of olives and table olives as a valuable source of bioactive compounds.

Oral Communication Skills for Scientific Presentations

William B. Krantz President's Teaching Scholar and Professor Emeritus, University of Colorado, Boulder, CO, USA;Rieveschl Ohio Eminent Scholar and Professor Emeritus, University of Cincinnati, Cincinnati,OH, USA

A practical, compact guidebook covering the 'nuts and bolts' of effective public speaking

ISBN: 978-0-12-805418-5

PUB DATE: April 2016

FORMAT: Paperback

PAGES: c. 160

AUDIENCE

Students and researchers across the sciences interested in improving their oral communication skills; in particular non-native English speakers

KEY FEATURES

- Discusses best practices in putting together an effective talk
- Focuses on leveraging the speaker's existing skill sets to develop the delivery style that works best for that individual
- Features one-page quick reference guides for giving formal oral and informal poster presentations
- Addresses cross-cultural communication as well as particular concerns for non-native English speakers
- Includes a companion site with tools and video examples of formal and informal presentations for further self-guidance

DESCRIPTION

Oral Communication Skills for Scientific Presentations is intended for inexperienced speakers as well as those aspiring to improve their communication skills in making either formal or informal presentations on a technical subject. A complement to having good organization for a technical presentation is to have an effective delivery style. This book provides a template for organizing a technical talk that will include a discussion of various ways to effectively develop each part of a technical presentation.

A special feature of *Oral Communication Skills for Scientific Presentations* is the focus on making presentations to a cross-cultural audience. This relates to relatively minor considerations such as how to list the names of the co-authors on your presentation as well as to more substantive considerations such as how to handle eye contact and use humor, both of which can differ across the global spectrum of cultures. The cross-cultural focus of this book relates not only to the audience, but also to the speaker. This book also includes helpful tips for non-native English speakers.

Graduate Research, 4e

A Guide for Students in the Sciences

Robert V. Smith Collaborative Brain Trust University Consulting (CBT UC), Sacramento, CA, USA
Llewellyn D. Densmore Department of Biological Sciences, Texas Tech University, Lubbock, TX, USA
Edward F. Lener University Libraries, Virginia Tech, Blacksburg, VA, USA

This newly revised go-to resource is for graduate researchers at all stages of study and covers a range of topics including writing and preparation of research proposals, developing and refining teaching skills, and ethics and compliance areas such as research involving human subjects and animals

ISBN: 978-0-12-803749-2
PREVIOUS EDITION ISBN: 9780295977058
PUB DATE: February 2016
FORMAT: Paperback
PAGES: c. 288

AUDIENCE
Graduate student, graduate advisors, and mentors across the Sciences

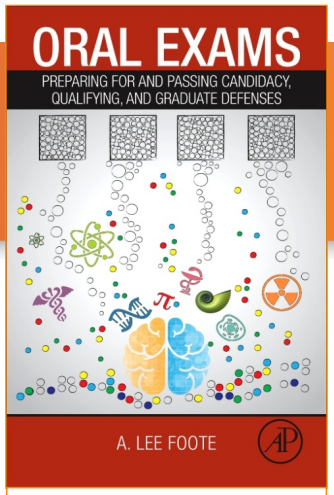
KEY FEATURES

- Discusses a broad range of topics including time management, library and literature work, and grant support
- Includes a new chapter on career planning and development with advice on careers in academia, government, and the private sector
- Contains chapters that promote the development of a varied set of communication skills
- Greatly expanded treatment of graduate study and research in international settings

DESCRIPTION

Graduate Research is an all-in-one resource for prospective and matriculated graduate students in the sciences. The newly revised edition includes updates to every chapter. *Graduate Research* covers a range of topics including writing and preparation of research proposals, developing and refining teaching skills, and ethics and compliance areas such as research involving human subjects and animals.

Graduate Research helps readers navigate the multidimensional and interdisciplinary world of scientific research and it is an invaluable resource for graduate researchers as well as those in advising or mentoring roles.



Oral Exams

Preparing For and Passing Candidacy, Qualifying, and Graduate Defenses

Lee A Foote Professor and Director, Devonian Botanic Garden, University of Alberta, Edmonton, AB, Canada

This book provides students with a great resource to help them prepare for oral comprehensive and viva voca exams, and is also valuable for faculty as they prepare new questions.

ISBN: 978-0-12-802578-9

PUB DATE: September 2015

FORMAT: Paperback

PAGES: c. 192

AUDIENCE

Graduate students, postdoctoral fellows and faculty in every discipline

KEY FEATURES

- Describes in detail the general format of oral comprehensive exams, viva voce examinations and defenses, what to expect, and what the requirements are that students need to fulfill to pass.
- Includes appendices with numerous practice questions sourced from a range of disciplines and countries for individual or group learning
- Useful for Early Career academics that are supervising, supporting, and examining PhD students

DESCRIPTION

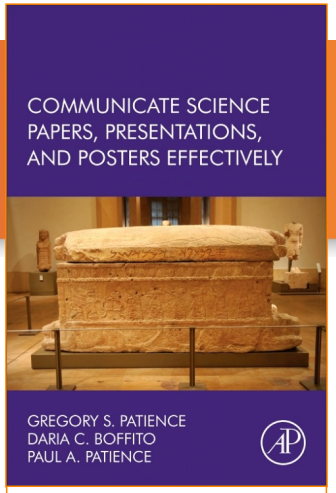
Oral Exams: Preparing For and Passing Candidacy, Qualifying, and Graduate Defenses provides guidance on how to prepare for oral comprehensive and viva voce exams.

Topics discussed include the supervisory committee, preparing the seminar, arranging content, mental preparation, question framing, and the types of questions to expect.

At its core, the book prepares students to be the best they can be by offering insights into how to interpret and appropriately respond to explicit and implied oral comps questions.

This book benefits faculty by helping them prepare new questions, also providing tips on how to mentor their students in preparation for exams.

The training included can be used to prepare for intensive qualifying or certification exams, job interviews, and presentations.



Communicate Science Papers, Presentations, and Posters Effectively

Gregory S Patience Department of Chemical Engineering, Ecole Polytechnique de Montreal, Canada
Daria C. Boffito Department of Chemical Engineering, Ecole Polytechnique de Montreal, Canada
Paul Patience Ecole Polytechnique de Montreal, Canada

The tools readers need to become better writers, presenters, and communicators

KEY FEATURES

- Covers how to accurately and clearly exhibit results, ideas, and conclusions
- Identifies phrases common in scientific literature that should never be used
- Discusses the theory of presentation, including “before and after” examples highlighting best practices
- Provides concrete, step-by-step examples on how to make camera ready graphs and tables

DESCRIPTION

Communicate Science Papers, Presentations, and Posters Effectively is a guidebook on science writing and communication that professors, students, and professionals in the STEM fields can use in a practical way. This book advocates a clear and concise writing and presenting style, enabling users to concentrate on content.

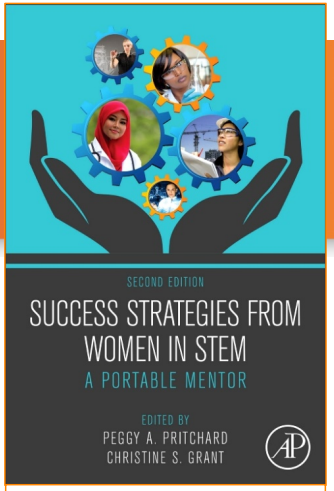
The text is useful to both native and non-native English speakers, identifying best practices for preparing graphs and tables, and offering practical guidance for writing equations. It includes content on significant figures and error bars, and provides the reader with extensive practice material consisting of both exercises and solutions.

ISBN: 978-0-12-801500-1
PUB DATE: August 2015
FORMAT: Paperback
PAGES: c. 264

AUDIENCE

Graduate students, research fellows, post-docs, professors, scientists and researchers in STEM fields.

LIFE SCIENCES
PROFESSIONAL AND CAREER DEVELOPMENT
Please contact your Elsevier Sales or Customer Service Representative



Success Strategies From Women in STEM, 2e

A Portable Mentor

Edited by: ***Peggy A. Pritchard*** Associate Librarian, Learning and Curriculum Support Team, University of Guelph, Guelph, ON, Canada
Christine Grant PhD, Full Professor of Chemical and Biomolecular Engineering and Associate Dean of Faculty Advancement, North Carolina State University, College of Engineering, Raleigh, NC, USA

A comprehensive and accessible manual that provides valuable strategies, tools, and sucess tips for women pursuing and involved in STEM careers

"...we need women to fully participate in this industry...morally and ethically, it's simply the right thing to do. This book will undoubtedly help."--**Network Security,** ***Success Strategies from Women in STEM, Second Edition***

ISBN: 978-0-12-397181-4
PREVIOUS EDITION ISBN: 978-0-12-088411-7
PUB DATE: June 2015
FORMAT: Paperback
PAGES: c. 460

AUDIENCE
Women pursuing careers or involved in careers in science, technology, engineering and mathematics

KEY FEATURES

- Preserves the style and tone of the first edition by bringing together mentors, trainees and early-career professionals in a series of conversations about important topics related to careers in STEM fields, such as leadership, time stress, negotiation, networking, social media and more
- Identifies strategies that can improve career success along with stories that elucidate, engage, and inspire
- Companion website provides authoritative information from successful women engaged in STEM careers, including annotated links to key organizations, associations, granting agencies, teaching support materials, and more

DESCRIPTION

Success Strategies from Women in Stem: A Portable Mentor, Second Edition, is a comprehensive and accessible manual containing career advice, mentoring support, and professional development strategies for female scientists in the STEM fields.

This updated text contains new and essential chapters on leadership and negotiation, important coverage of career management, networking, social media, communication skills, and more. The work is accompanied by a companion website that contains annotated links, a list of print and electronic resources, self-directed learning objects, frequently asked questions, and more.

With an increased focus on international relevance, this comprehensive text contains shared stories and vignettes that will help women pursuing or involved in STEM careers develop the necessary professional and personal skills to overcome obstacles to advancement.

LIFE SCIENCES
PROFESSIONAL AND CAREER DEVELOPMENT
Please contact your Elsevier Sales or Customer Service Representative

Titles Index

Titles Index

Titles Index

Titles Index

Titles Index

Titles Index

Sales Representatives Index

EMEA:

(UK, IRELAND, EASTERN EUROPE, RUSSIA, SCANDINAVIA, CYPRUS, GERMANY, AUSTRIA, SWITZERLAND, SPAIN, PORTUGAL, FRANCE, BENELUX, ITALY, MALTA, GREECE & ISRAEL)

James Duckworth - Sales Director, Print & 3PP, EMEA
Mobile: + 44 (0) 7919 324982 • Fax: +44 (0) 01865 853330
Email: j.duckworth@elsevier.com

DACH, EASTERN EUROPE, SOUTHERN EUROPE & RUSSIA

Martina Morris - Regional Channel Manager
Tel: + 49 (0) 4792 950296 • Fax: + 49 (0) 4792 950297 • Mobile: + 49 (0) 174 344 2310
Email: m.morris@elsevier.com

UK WHOLESALE, RETAIL BOOKSTORES & CORPORATE

Linda Jackson - Channel Manager
Mobile: + 44 (0) 7824 626109 • Fax: + 44 (0) 1865 853330
Email: linda.jackson@elsevier.com

UK ACADEMIC, MIDDLE EAST AND SOUTH AFRICA

Paul McElroy - UK Academic and MEA Regional Channel Manager
Tel: + 44 (0) 7901 897009 • Fax: + 44 (0) 1865 853330
Email: p.mcelroy@elsevier.com

FRANCE, BENELUX & SCANDINAVIA

Christiane Leipersberger - Channel Manager
Mobile: + 49 7955 388712 • Fax: + 44 7955 388713
Email: c.leipersberger@elsevier.com

Sales Representatives Index

MEA:

(MIDDLE EAST, AFRICA & TURKEY)

James Duckworth - Sales Director, Print & 3PP, EMEA
Mobile: + 44 (0) 7919 324982 • Fax: +44 (0) 01865 853330
Email: j.duckworth@elsevier.com

UK ACADEMIC, MIDDLE EAST AND SOUTH AFRICA

Paul McElroy - UK Academic and MEA Regional Channel Manager
Tel: + 44 (0) 7901 897009 • Fax: + 44 (0) 1865 853330
Email: p.mcelroy@elsevier.com

EGYPT, NORTH AFRICA, TURKEY, CIS & LEVANT

Ahmed Samir Helmy - Channel Manager
Mobile: +20 1002050504 • Fax: +44 (0) 1865 853330
Email: a.helmy@elsevier.com

CENTRAL AFRICA

Julian Russ - Consultant Sales Agent
Tel: +44 (0)1993 886719
Email: Orders@tulapublishing.co.uk.

LATAM:

(BRAZIL, SOUTH AMÉRICA AND MÉXICO)

Elsevier Office Rua Quintana, 753 8 º andar - São Paulo • SP • Brazil • CEP-04569-011
João Almeida, Sales Executive – Imprint Books
Mobile: + 55 11 99315 1194 • Fax: ++ 55 11 5105-8723 • Email: j.almeida@elsevier.com

ASIA:

AUSTRALIA AND NEW ZEALAND

Elsevier Australia 475 Victoria Avenue • Tower 1, Level 12 • Chatswood, NSW 2067 • Australia
Suzanne Hall - Tel: +61 2 9422 8548 • Fax: +61 2 9422 8501 • Email: suzanne.hall@elsevier.com

CHINA & HONG KONG

Reed Elsevier Information Technology (Beijing) Co. Ltd Unit 1-6, Level 7, Tower W1
Oriental Plaza, No 1, East Chang An Avenue • Dong Cheng District • Beijing 100738 • China
Liu Xiaolin - Tel: + 86 10 852 0885 3 • Fax: +8610 8518 9290 • Email: x.liu@elsevier.com

Sales Representatives Index

JAPAN

Elsevier Japan 4th Floor, 1-9-15 Higashi-Azabu • Minato-ku • Tokyo • 106-0044 Japan
Tel: +81 3 5561 1051 • Fax: +81 3 5561 0451 • Email: Jp.stbooks@elsevier.com

KOREA

Elsevier Korea 4FL Chunwoo Bldg, 534 Itaewon-dong • Yongsan-gu, • Seoul 140-861 • South Korea
Lee Mahn-Jin - Tel: +82 2 6714 3138 • Fax: +82 2 725 4388 • Email: ma.lee@elsevier.com

MALAYSIA, BRUNEI & CAMBODIA

Elsevier, a division of LexisNexis Malaysia Sdn Bhd T1-L6, Jaya33 • No. 3 Jalan Semangat Seksyen 13 • 46100 Petaling Jaya, Selangor • Malaysia
Michelle Foo - Tel: +603 7882 3637 • Fax: +603 7882 3699 • Email: m.foo@elsevier.com

SOUTH ASIA

Elsevier (A Division of Reed Elsevier India Pvt Ltd) 14th Floor, Building no 10 B • DLF Cyber City, Phase II • Gurgaon, Haryana, 122002 • India
Dr. Sangeeta Mehta / Miss Shweta Sethi - Tel: +91 124 4774444 • Fax: +91 124 4774201
Email: s.mehta@elsevier.com / sh.sethi@elsevier.com

TAIWAN

Elsevier Taiwan LLC Rm. N-818, 8F • Chia Hsin Building II, No. 96 • Zhong Shan N. Road, Sec. 2 • Taipei 10449 • Taiwan
Lisa Chen - Tel: +886 2 2522 5920 • Fax: +886 2 2522 1885 • Email: l.chen@elsevier.com

THAILAND & MYANMAR

Elsevier (Singapore) Pte Ltd- Thailand Representative Office Ploenchit Center, Ground Floor (Elite office Unit 7) 2 Sukhumvit Road • Klongtoey, Bangkok 10110 • Thailand
Walika Lhaothong - Tel: +66 2305 6693 • Mobile: +66 81 806 4045 • Fax: +66 2251 3109
Email: w.lhaothong@elsevier.com

SINGAPORE, INDONESIA, VIETNAM, PHILIPPINES & LAOS

Elsevier (Singapore) Pte Ltd 3 Killiney Road, #08-01 • Winsland House 1 • Singapore 239519
Adam Goh - Tel: +65 6349 0282 • Mobile: +65 8182 7155 • Fax: +65 6733 1050 •
Email: adam.goh@elsevier.com

Sales Representatives Index

ELSEVIER AGENT:

PHILIPPINES - CRW Marketing Services for Publishers, Inc.
Tony P Sagun - Tel: +632 660 5480 / +632 584 8448 • Mobile: +639209086303
Fax: +632 660 0342
Email: crwmarketing@pldtdsl.net / lwwagent@pldtdsl.net

AMAZON:

Kai Wuerfl-Davidek - Channel Manager, EU
Tel: + 43 (0) 1 494 2376 • Mobile: +43 (0) 676 8232 4949
Email: k.wuerfl@elsevier.com

FOREIGN RIGHTS:

SCIENCE & TECHNOLOGY BOOKS ForeignRightsSTBooks@Elsevier.com

Helen Tian - Team Manager/S&T Book Rights; APAC
Tel: + 86 10 8520 8829 • Email: h.tian@elsevier.com

Emma Wyatt - Account Manager/Discovery Solutions & Copyright;
Europe, Middle East & Latin America
Tel: +44 1865 844728 • Mobile: +44 747 114 2122
Email: e.wyatt@elsevier.com

Jenny Xiong - Licensing Manager, China Mainland & Taiwan
Tel: +86 10 8520 8878
Email: j.xiong@elsevier.com

Elsevier Books Customer Service

NORTH AMERICAN SALES CONTACTS:

UNITED STATES, CANADA, CARIBBEAN, AND LATIN AMERICA:

Email: USBKInfo@elsevier.com

US Customers:
Toll-Free: +1 (800) 545-2522 • Fax: +1 (800) 535-9935

Customers Outside US:
Tel: +1 (314) 447-8010 • Fax: +1 (314) 447-8030

RETAIL/WHOLESALE SALES:

Debbie Fisher – Account Manager
Email: d.fisher@elsevier.com
nabooksales@elsevier.com

CORPORATE/BULK SALES:

Mark Morin – Solutions Sales Manager
Email: m.morin@elsevier.com

ACADEMIC SALES / COLLEGES & UNIVERSITIES:

Joanna Raum – NA Academic Regional Manager
Tel: 603-418-5164 • Email: j.raum@elsevier.com
textbooks@elsevier.com

PROFESSORS/INSTRUCTORS:

Register at our instructor site **http://textbooks.elsevier.com**, to browse our list of cutting-edge books at student-friendly prices, request review copies, access ancillaries, view selected books electronically, and contact your textbook representative.

Elsevier Books Customer Service

CONTACT DETAILS

Trade: +44 (0) 1865 844644 • **E-mail:** tradeorders@elsevier.com
Direct Sales: +44 (0) 1865 844640 • **E-mail:** directorders@elsevier.com

WEB

Trade Customers:
virtuale.elsevier.com
pubeasy.com
bookorders.nielsenbooknet.com

Institutional Customers:
sciencedirect.com

AUSTRALIA, NEW ZEALAND & FIJI

Email: customerserviceau@elsevier.com
Tel: Australia: 1800 263 951 (toll free) • Tel: New Zealand: 0800 170 165 (toll free)
Fax: +63 2 352 1394

SOUTH ASIA

Email: csindia@elsevier.com • Tel : +91 44 4299 4567 (Extensions: 4915 to 4918)
Fax: ++91 44 4299 4568

ASIA *(China, Japan, Korea, South East Asia, Taiwan)*

Email: asiabkinfo@elsevier.com • Tel: +65 6349 0222 • Fax: +63 2 352 1394


facebook.com/elsevierfoodscience


twitter.com/elsfoodscience


scitechconnect.elsevier.com

Imprints

IMPRINTS OF ELSEVIER:

Academic Press
Academic Press and AOCS Press
Butterworth-Heinemann
Chandos Publishing
Digital Press
Elsevier
Elsevier Advanced Technology
Elsevier Science
Gulf Professional Publishing
Gulf Publishing Company
JAI Press
Morgan Kaufmann
Newnes
North Holland
Pergamon
Pergamon Flexible Learning
Syngress
William Andrew
Woodhead Publishing

DISTRIBUTION AGENCY FOR:

Bentham Science Publishers
ChemTec
ISTE Press

Knowledge to Fill in the Gaps.

Researchers say that using Elsevier Reference Modules is like working alongside a distinguished expert who steers you toward the most relevant and dependable content.

Continuously evolving

The modules are under constant review, with articles updated and even time stamped to reflect new research in the field. So the material is never stale, never obsolete.

Eminently trustworthy

An independent panel of experts hand-selects only the highest-quality content from Elsevier Reference Works. It's the very best of the best.

Intelligently structured

The modules are organized into an intuitive hierarchy. Find the right content fast, together with quick-links to related material. No sifting through 22 separate Reference Books.

For academics, professionals, and government officials:

- Exciting new possibilities and perspectives in related but unfamiliar areas of research.
- An ideal teaching tool for classrooms, as well as graduate students and researchers
- Uninterrupted shifting between journal and book content

For librarians and information specialists:

- A quicker route to the most current, focused content
- New possibilities for research across disciplines and into new areas for investigation
- New possibilities for research across disciplines and into new areas for investigation

The most trustworthy digital content for libraries comes from Elsevier Reference Modules. TO LEARN MORE:

Librarians: Ask your Elsevier sales representative for details and flexible pricing options.

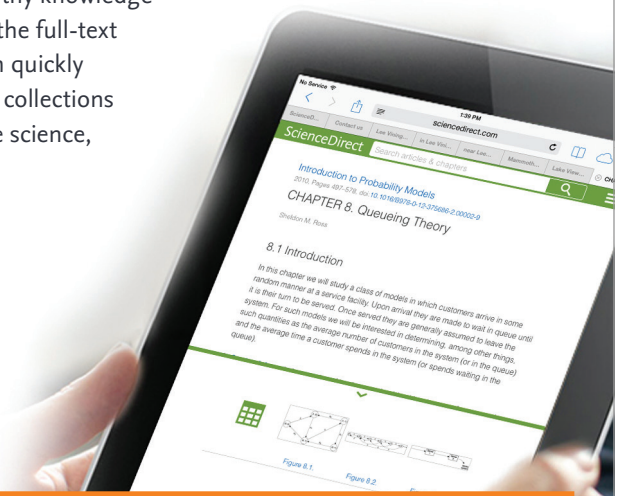
Researchers: Visit www.ReferenceModules.com

ScienceDirect 2016 eBooks Collection

Accelerate Research with eBooks on ScienceDirect

Inspire your patrons with the in-depth, trustworthy knowledge that comes from Elsevier eBooks. Delivered on the full-text ScienceDirect site, students and researchers can quickly find the information they need in 23 key subject collections published under well-known imprints within the science, technology and health sciences disciplines.

For more information talk to your Elsevier Sales Representative today, or visit:
http://elsevier.com/sciencedirect/books



2016 eBook Collections:

Agricultural, Biological and Food Sciences	Immunology and Microbiology
Biochemistry, Genetics and Molecular Biology	Materials Science
Biomedical Science and Medicine	Mathematics
Chemical Engineering	Neuroscience
Chemistry	Pharmacology, Toxicology and Pharmaceutical Science
Computer Science	Physics and Astronomy
Earth and Planetary Sciences	Psychology
Energy	Social Sciences
Engineering	Specialty Medicine
Environmental Science	Health Professions
Finance	Veterinary Medicine
Forensics and Security	