

Handbook Of Postharvest Technology Cereals Fruits Vegetables Tea And Spices Books In Soils Plants And The Environment

Cereals, legumes, oilseeds, fruits, and vegetables are the most important food crops in the world, with cereal grains contributing the bulk of food calories and proteins worldwide. Generally, the supply of grains and other food can be enhanced by increasing production and by reducing postharvest losses. While food production has increased significantly

An introductory text for students, professionals and others engaged in agricultural engineering and food sciences and technology in the primary processing of cereals, pulses, fruits and vegetables.

The urgent need for sustainability within the food producing industries and agriculture has turned the interest of research to investigate new non-thermal technologies, nanotechnologies and other practices in postharvest treatment of crops and fruits. Subsequently, there is a need for a new guide covering the latest developments in this particular direction. Food Losses, Sustainable Postharvest and Food Technology provides solutions to postharvest treatment technologies. It explores modern non-thermal technologies, focusing on postharvest losses and quality of fresh-cut products. In addition, it discusses the implications for postharvest technology research, policies and practices. It also focuses on the most recent advances in the field, while it explores the potentiality and sustainability of already commercialized processes and products. Aimed at professionals working in the food industry and agriculture, it could also be utilized as a handbook for anyone dealing with sustainability issues of food production in spite of postharvest treatment. Thoroughly explores modern non-thermal technologies in postharvest treatment Discusses the implications for postharvest technology research, policies and practices Analyzes the potentiality and sustainability of already commercialized processes and products

Postharvest Handling: A Systems Approach introduces a new concept in the handling of fresh fruits and vegetable. Traditional treatments have been either physiologically based with an emphasis on biological tissue or technologically based with an emphasis on storage and handling. This book integrates all processes from production practices through consumer consumption with an emphasis on understanding market forces and providing fresh product that meets consumer expectations. Postharvest physiologists and technologists across the disciplines of agricultural economics, agricultural engineering, food science and horticulture along with handlers of minimally-processed products within the fresh produce fruit and vegetable processing industries will find this to be an invaluable source of information. Uses a systems approach that provides a unique perspective on the handling of fresh fruits and vegetables Designed with the applied perspective to complement the more basic perspectives provided in other treatments Provides the integrated, interdisciplinary perspective needed in research to improve the quality of fresh and minimally processed products Emphasizes that the design of handling systems should be market-driven rather than concentrating on narrow specifics

Cereals, Pulses, Fruits and Vegetables

Advances in Postharvest Management of Cereals and Grains

Produce Degradation

Properties, Processing, and Nutritional Attributes

Postharvest Handling

Drying Atlas

The second edition of this very well-received book, which in its first edition was entitled Postharvest Technology of Fruits and Vegetables, has been welcomed by the community of postharvest physiologists and technologists who found the first edition of such great use. The book covers, in comprehensive detail, postharvest physiology as it applies to postharvest quality, technology relating to maturity determination, harvesting, packaging, postharvest treatments, controlled atmosphere storage, ripening and transportation on a very wide international range of fruits and vegetables. The new edition of this definitive work, which contains many full colour photographs, provides key practical and commercially-oriented information of great use in helping to ensure that fruit and vegetables reach the retailer in optimum condition, with the minimum of loss and spoilage. Fruits and vegetables, 2nd edition is essential reading for fruit and vegetable technologists, food scientists and food technologists, agricultural scientists, commercial growers, shippers and warehousing operatives and personnel within packaging companies. Researchers and upper level students in food science, food technology, plant and agricultural sciences will find a great deal of use within this landmark book. All libraries in research establishments and universities where these subjects are studied and taught should have copies readily available for users. A. K. Thompson was formerly Professor and head of Postharvest Technology, Silsoe College, UK.

Drying grain is necessary for proper storage, handling and processing; the methods used for drying grain have an important influence on quality and the overall economics of the process. This book provides all the tools needed for effective grain drying, including mathematical theory, tabulated data on the physical and thermal properties of grains, and more.

This book covers the importance of post-harvest technology in horticultural crops, fruit growth, development and post harvest physiology, fruit maturity indices, harvesting of fruits and vegetables, initial handling of fruits and vegetable after harvesting, precooling of horticulture produce, transportation, etc.. It is a rich source of modern engineering technologies for income generating concept for agro based industries. The book is specially dedicated to the sub sector of the fruits and vegetables plants dealing with the fresh primary product from the product reception following the harvesting up-to the storage and before launches it to the market. This book will serve as a comprehensive guide for all the people who focuses on post harvest management skills. Note: T&F does not sell or distribute the hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka.

The Handbook of Postharvest Technology presents methods in the manufacture and supply of grains, fruits, vegetables, and spices. It details the physiology, structure, composition, and characteristics of grains and crops. The text covers postharvest technology through processing, handling, drying and milling to storage, packaging, and distribution. Additionally, it examines cooling and preservation techniques used to maintain the quality and the decrease spoilage and withering of agricultural products.

Nutraceutical and Health Potential

Handbook of Fruit Sciences and Technology

Post-harvest Technologies of Fruits & Vegetables

Technical Handbook for the Paddy Rice Postharvest Industry in Developing Countries

Fruit and Vegetables

A Systems Approach

Handbook of Drying TechnologyCereals, Fruits, Vegetables, Tea, and SpicesCRC Press

Drying Atlas: Drying Kinetics and Quality of Agricultural Products provides, in a condensed and systematic way, specific insights on the drying-relevant properties and coefficients of over 40 agricultural products. It also presents information about the production methods that influence the drying process, the quality of the dried product, the official quality standards of the products, and the design principles and operating characteristics of drying systems that are widely used in the postharvest processing and food industry. Available books on drying technology mainly focus on drying theory and simulation of drying processes. This book offers systematic information on the impact of other important parameters, such as relative humidity, air flow rate, mechanical, thermal and chemical pre-treatment, and drying mode for specific products. It is a unique and valuable reference for scientists and engineers who want to focus on industrial drying applications and dryers, as well as graduate and post-graduate students in postharvest technology and drying. Explores the production methods that influence the drying process and quality of the dried product Outlines the official quality standards of the products, the design principles, and the operating characteristics of drying systems that are used in postharvest processing Features 41 chapters that are (each for an agricultural product) presented in a condensed and systematic way

Handbook of Drying for Dairy Products is a complete guide to the field's principles and applications, with an emphasis on best practices for the creation and preservation of dairy-based food ingredients. Details the techniques and results of drum drying, spray drying, freeze drying, spray-freeze drying, and hybrid drying Contains the most up-to-date research for optimizing the drying of dairy, as well as computer modeling options Addresses the effect of different drying techniques on the nutritional profile of dairy products Provides essential information for dairy science academics as well as technologists active in the dairy industry

World-wide losses of crops, post-harvest, through microbial action, pests, diseases and other types of spoilage amount to millions of tons every year. This essential handbook is the first in a three-volume series which covers all factors affecting post-harvest quality of all major fruits, vegetables, cereals and other crops. Compiled by members of the world-renowned Natural Resources Institute at the University of Greenwich, Chatham, UK, the comprehensive contents of this landmark publication encourage interactions between each sector of the agricultural community in order to improve food security, food safety and food quality intoday's global atmosphere. Through the carefully compiled and edited chapters, internationally respected authors discuss ways to improve harvest yield and quality, drawing on their many years' practical experience and the latest research findings, applications and methodologies. Subjects covered include: an introduction to thesystems used in post-harvest agricultural processes, physical andantibiotic factors affecting post-harvest commodities, storageissues, pest management, food processing and preservation, foodsystems, the latest research and assimilation of this work, andcurrent trade and international agreements. An invaluable glossaryshowing important pests, pathogens and plants is alsoincluded. Crop Post-Harvest: Science and Technology Volume 1: Principlesand Practice is a must-have reference book which offers the readeran overview of the globalisation of post-harvest science, technology, economics, and the development of the storage andhandling of perishable and durable products. Volumes 2 and 3 willgo on to explore durables and perishables individually in moredetail, with many case studies taken from around the globe. This 3-volume work is the standard handbook and reference forall professionals involved in the harvesting, shipping, storage andprocessing of crops, including agricultural and plant scientists, food scientists and technologists, microbiologists, plantpathologists, entomologists and all post harvest, shipping and storage consultants. Libraries in all universities and research establishments where these subjects are studied and taught should have multiple copies on their shelves

On-farm Post-harvest Management of Food Grains

Pathways and Prevention

Handbook of Research on Advances and Applications in Refrigeration Systems and Technologies

Postharvest Technology of Fruits and Vegetables: General concepts and principles

Postharvest Technology and Food Process Engineering

Production, Composition, Storage, and Processing

Produce Degradation is the first book to focus on the processes that result in produce quality deterioration and their prevention. It addresses the mechanism of reactions that affect produce quality under conditions from the farm to the table. It also reviews the degradative changes and conditions that favor these processes, such as the biochemistry, microbiology, physiology, polymer and cellular science, and genetics. Written by experts in the field, topics include the mechanisms of nutrient loss, pigment degradation, cell tissue and membrane degradation, the genetic basis of product stability, the role of water and moisture in produce quality, and prevention during transport.

Conflicts between humans and wildlife have occurred since the dawn of humanity. In Africa, these conflicts have become more frequent and severe over recent decades as a result of human population growth, extension of transport routes and expansion of agricultural and industrial activities which together have led to increased human encroachment on previously wild and uninhabited areas. With a focus on large herbivores and carnivores such as elephant, lions and crocodiles, this book presents the issues, describes different methods of conflict management and outlines a three-step framework for decision making. This publication will be of interest to villagers, farmers, wildlife practitioners, development workers and researchers, to local, regional and national authorities, and ultimately to anybody keen to learn more about the issue.

Note for the electronic edition: This draft has been assembled from information prepared by authors from around the world. It has been submitted for editing and production by the USDA Agricultural Research Service Information Staff and should be cited as an electronic draft of a forthcoming publication. Because the 1986 edition is out of print, because we have added much new and updated information, and because the time to publication for so massive a project is still many months away, we are making this draft widely available for comment from industry stakeholders, as well as university research, teaching and extension staff.

Written by noted experts in the field, Handbook of Mango Fruit: Production, Postharvest Science, Processing Technology and Nutrition offers a comprehensive resource regarding the production, trade, and consumption of this popular tropical fruit. The authors review the geographic areas where the fruit is grown and harvested, including information on the ever-expanding global marketplace that highlights United States production, imports and exports, and consumption, as well as data on the outlook for the European market. Handbook of Mango Fruit outlines the postharvest handling and packaging techniques and reviews the fruit's processed products and byproducts that are gleaned from the processing of waste. The authors include information on the nutritional profile of the mango and review the food safety considerations for processing and transport of mangoes. This comprehensive resource: Reviews global mango production trends and countries that are the major exporters and importers of mangoes Explores the burgeoning marketplace for mangoes with special emphasis on the US and European marketplace Assesses latest trends in packaging of and shipping of mangoes Provides in depth coverage on value-added processing and by-products utilization Offers vital information on the innovative processing technologies and nutritional profile of popular tropical fruit Written for anyone involved in the production, marketing, postharvest handling, processing and by-products of mangoes, Handbook of Mango Fruit is a vital resource offering the most current information and guidelines on the burgeoning marketplace as well as the safe handling, production, and distribution of mangoes.

Drying Kinetics and Quality of Agricultural Products

Harvesting, Handling and Storage

Post Harvest Technology of Cereals, Pulses and Oilseeds

Postharvest Physiology and Pathology of Vegetables

Cereals Processing Technology

Fundamental Issues

Running a productive agriculture system has always been about having the right tools and the know-how to pursue optimization and efficiency. In the 21st century, the case can be made that the agriculturalist's most important tool is not the cultivator, but the computer. While you still need to know how to adapt to the day-to-day challenges of land and climate, just as importantly, you need to know how to make reliable projections based on the manipulation of virtual variables. Practice what you learn with real life examples and practical problem solving exercises Agricultural Systems Management: Optimizing Efficiency and Performance teaches you how to create strategies using readily available off-the-shelf software, spreadsheets, and Internet material to meet the challenges commonly faced in agricultural production, processing, and management. The text provides the step-by-step direction necessary to allow you to obtain optimal results in field and livestock operations, machinery selection, and the planning/forecasting of crops and yield.

A thoroughly revised edition that encompasses new material including sections dealing with extrusion cooking and the use of cereals for animal feed. The section on industrial uses for cereals has been expanded considerably.

WHOLE GRAINS AND HEALTH The updated guide to whole grains and their integral role in nutritional health In an increasingly health-conscious society, the potential benefits of whole grain products are of paramount importance to manufacturers, dietitians, and consumers alike. *Whole Grains and Health* covers all aspects of this crucial topic, presenting a data-driven study of whole grains' functional components, associated biomarkers and overall impact upon human health. Now in its second edition, the text has been revised and expanded to include six new chapters and groundbreaking new data. This essential guide features: Summaries of large research projects on the health effects of whole grain in Europe and the US New data on the associations between whole grain consumption and risk of developing chronic diseases Discussions of metabolomics and their use in addressing health effects and finding new biomarkers of both dietary exposure and health effects related to the diet Information on the use of genomics in studies of how gene-expression profiles change in response to whole grain intake Newly identified bioactive compounds in whole grains and whole grain fractions The new EU regulations on health claims that affect whole grain food products Providing information that will be of interest to food scientists, healthcare specialists and food industry professionals alike, the second edition of *Whole Grains and Health* is an essential resource for anyone concerned with the impact whole grains may have upon health.

While cereals remain the world's largest food yield - with more than 2.3 billion metric tons produced annually - consumer demands are on the rise for healthier cereal products with greater nutrition. *Cereal Grains: Properties, Processing, and Nutritional Attributes* provides a complete exploration of the scientific principles related to domesticated

Handbook of Mango Fruit

Handbook of Cereals, Pulses, Roots, and Tubers

Functionality, Health Benefits, and Applications

Handbook of Postharvest Technology

World Food: An Encyclopedia of History, Culture and Social Influence from Hunter Gatherers to the Age of Globalization

Postharvest Technology

This work offers comprehensive, current coverage of preharvest and postharvest handling and production of fruits grown in tropical, subtropical and temperate regions throughout the world. It discusses over 60 major and minor crops, and details developments in fruit handling and disease control, storage practices, packaging for fruit protection, siz

Tropical and subtropical fruits are popular products, but are often highly perishable and need to be transported long distances for sale. The four volumes of Postharvest biology and technology of tropical fruits review essential aspects of postharvest biology, postharvest technologies, handling and processing technologies for both well-known and lesser-known fruits. Volume 1 contains chapters on general topics and issues, while Volumes 2, 3 and 4 contain chapters focused on individual fruits, organised alphabetically. Volume 1 provides an overview of key factors associated with the postharvest quality of tropical and subtropical fruits. Two introductory chapters cover the economic importance of these crops and their nutritional benefits. Chapters reviewing the postharvest biology of tropical and subtropical fruits and the impact of preharvest conditions, harvest circumstances and postharvest technologies on quality follow. Further authors review microbiological safety, the control of decay and quarantine pests and the role of biotechnology in the improvement of produce of this type. Two chapters on the processing of tropical and subtropical fruit complete the volume. With its distinguished editor and international team of contributors, Volume 1 of Postharvest biology and technology of tropical and subtropical fruits, along with the other volumes in the collection, will be an essential reference for both for professionals involved in the postharvest handling and processing of tropical and subtropical fruits and for academics and researchers working in the area. Along with the other volumes in the collection, Volume 1 is an essential reference for professionals involved in the postharvest handling and processing of tropical and subtropical fruits and for academics and researchers working in the area Focuses on fundamental issues of fruit physiology, quality, safety and handling relevant to all those in the tropical and subtropical fruits supply chain Chapters include nutritional and health benefits in the area, preharvest factors, food safety, and biotechnology and molecular biology

Packaging, Eco-Friendly Packaging For Exports, Export Packaging, Corrugated Board, Plastics, Bopp Films, Plastic Woven Sacks, Expanded Polystyrene, Fl Exhile Packaging, Glass Containers, Aluminium Foil, Adhesive Tapes, Wooden Containers, Systems Packaging, Aseptic Packaging, Vacuum Packaging, Aerosol Packaging, Packaging Of Horticultural Crops, Meat Fish & Poultry, Dairy Products, Biscuits, Bread & Confectionery, Fruit Juics, Ready To Eat Foods, Pharmaceutical Products, Cosmetic, Soaps & Detergents, Fertilizers & Pesticides Industry, Handicrafts For Export, Packaging Of Textiles Etc. And Many More Etc.

Fruits are botanically diverse, perishable, seasonal andpredominantly regional in production. They come in many varieties,shapes and size, colors, flavors and textures and are an importantpart of a healthy diet and the global economy. Besides vitamins,minerals, fibers and other nutrients, fruits contain phenoliccompounds that have pharmacological potential. Consumed as a partof a regular diet, these naturally occurring plant constituents arebelieved to provide a wide range of physiological benefits throughtheir antioxidant, anti-allergic, anti-carcinogenic, andanti-inflammatory properties. Handbook of Fruits and Fruit Processing distilsthelatest developments and research efforts in this field that areaimed at improving production methods, post-harvest storage andprocessing, safety, quality and developing new processes andproducts. This revised and updated second edition expands andimproves upon the coverage of the original book. Some highlightsinclude chapters on the physiology and classification of fruits,horticultural biochemistry, microbiology and food safety (includingHACCP, safety and the regulation of fruits in the global market),sensory and flavor characteristics, nutrition, naturally presentbioactive phenolics, postharvest physiology, storage,transportation and packaging, processing and preservationtechnologies. Information on the major fruits includes tropical andsubser fruits, frozen fruits, canned fruit, jelly, jam andpreserves, fruit juices, dried fruits and wines. The 35 chaptersare organized into five parts: Part I: Fruit physiology, biochemistry, microbiology, nutritionand health Part II: Postharvest handling and preservation of fruits Part III: Product manufacturing and packaging Part IV: Processing plant, waste management, safety andregulations Part V: Production, quality and processing aspects ofmajor fruits and fruit products Each chapter has been contributed by professionals from aroundthe globe representing academia, government institutions andindustry. The book is designed to be a valuable source andreference book for scientists, product developers, students and allprofessionals with an interest in this field.

Grain Drying

An Introduction for Students of Food Science and Agriculture

Postharvest Biology and Technology of Tropical and Subtropical Fruits

Cereal Grains

Postharvest Handling of Horticultural Crops

Whole Grains and Health

Best practices for preserving quality and consumer appeal of fresh fruits, vegetables Clarifies calculations for efficient cooling, controlled ripening and storage Presents strategies for reducing microbial risks and post-harvest pathologies A comprehensive introduction to established and emergent post-harvest technologies, this text shows how to enhance the value of perishable fruits and vegetables and spoilage from farm to point of purchase. After investigating the structural, chemical and nutritional properties of fruits and vegetables, the book provides a step-by-step explanation of processing from machine harvesting through handling, ripening technologies, packaging and distribution. Emphasis is placed on ways to collect data needed to monitor quality. Psychrometric principles are presented along with calculations enabling effective refrigeration and control of transpiration, humidity and gases. The book includes examples and calculations for improving process control and predicting the shelf-life of temperate-climate and tropical fruits and vegetables.

Cereals, pulses, roots, and tubers are major food sources worldwide and make a substantial contribution to the intake of carbohydrates, protein, and fiber, as well as vitamin E and B. The Handbook of Cereals, Pulses, Roots, and Tubers: Functionality, Health Benefits, and Applications provides information about commercial cereals, pulses, and their nutritional profile, as well as health benefits and their applications. Split into four sections, this handbook covers all the recent research about the related crops and outlines matters needing further research in the field of agriculture sciences. Both qualitative and quantitative analysis of nutrients and bio-actives, and their beneficial effects on human health, are highlighted in this book. The conclusions drawn and future perspectives proposed in each take more focused approaches. FEATURES Covers the full spectrum of cereals, pulses, roots, and tubers grain production, processing, and their use for foods, feeds, fuels, and industrial materials, and other uses Contains the latest information from grain science professionals and food technologists alike Provides comprehensive knowledge on the nutritional and non-nutritional aspects of cereals, latest development in modification of native starch Provides information in enhancing shelf life and its utilization in phytochemical rich product development The result of various well-versed researchers across the globe sharing their knowledge and experience, this handbook will be a valuable resource for students, researchers, and industrial practitioners who wish to enhance their knowledge and

and tubers. The processing of food is no longer simple or straightforward, but is now a highly inter-disciplinary science. A number of new techniques have developed to extend shelf-life, minimize risk, protect the environment, and improve functional, sensory, and nutritional properties. The ever-increasing number of food products and preservation techniques cr This enlarged and fully-revised edition of a comprehensive text and reference book examines the principles, process, operation, design, and other aspects of drying, parboiling, storage, milling, and by-products of common cereals, pulses and oilseeds. Different types of machinery used in rice and other grain milling have been examined in detail and special emphasis has been placed on specifications and procedures of modern grain dryers, husk fired furnaces, and data on physiothermal and physicochemical properties of cereal grains.

Cereals, Fruits, Vegetables, Tea, and Spices

Food Wastes and By-products

Technology of Cereals

A Manual for Extension Workers with Special Reference to Africa

An Encyclopedia of History, Culture and Social Influence from Hunter Gatherers to the Age of Globalization

In recent years, the sustainability and safety of perishable foods has become a major consumer concern, and refrigeration systems play an important role in the processing, distribution, and storage of such foods. To improve the efficiency of food preservation technologies, it is necessary to explore new technological and scientific advances both in materials and production systems are presented along with calculations enabling effective refrigeration and control of transpiration, humidity and gases. The book includes examples and calculations for improving process control and predicting the shelf-life of temperate-climate and tropical fruits and vegetables.

Refrigeration Systems and Technologies gathers state-of-the-art research related to thermal performance and energy-efficiency. Covering a diverse array of subjects—from the challenges of surface-area frost-formation on evaporators to the carbon footprint of refrigerant chemicals—this publication provides a broad insight into the optimization of cold-supply chain practicing engineers, researchers, educators, and policymakers.

Focusing exclusively on postharvest vegetable studies, this book covers advances in biochemistry, plant physiology, and molecular physiology to maximize vegetable quality. The book reviews the principles of harvest and storage: factors affecting postharvest physiology, calcium nutrition and irrigation control: product quality changes during handling and storage: technical systems are presented along with calculations enabling effective refrigeration and control of transpiration, humidity and gases. The book includes examples and calculations for improving process control and predicting the shelf-life of temperate-climate and tropical fruits and vegetables.

Cereals processing is one of the oldest and most important of all food technologies. Written by a distinguished international team of contributors, this collection reviews the range of cereal products and the technologies used to produce them. It is designed for all those involved in cereals processing, whether raw material producers and refiners needing to match the consumer, or secondary processors benchmarking their operations against best practice in their sector and across cereals processing as a whole. The authoritative guide to key technological developments within cereal processing Reviews the range of cereal products and the technologies used to produce them

Agronomic crops have been used to provide foods, beverages, fodders, fuels, medicines and industrial raw materials since the dawn of human civilization. Today, agronomic crops are being cultivated by employing scientific methods instead of traditional methods. However, in the current era of climate change, agronomic crops are subjected to various environmental demands of the ever-increasing global population, new technologies and management practices are being adopted to boost yield and maintain productivity under both normal and adverse conditions. Scientists are now exploring a variety of approaches to the sustainable production of agronomic crops, including varietal development, soil management, nutrient and water

remarkable progress in developing stress tolerance in crops through different approaches. However, achieving optimal production to meet the increasing food demand is an open challenge. Although there have been numerous publications on the above-mentioned problems, and despite the extensive research being conducted on them, there is hardly any comprehensive addressing all aspects of production technologies, management practices and stress tolerance in agronomic crops in a single volume.

Optimizing Efficiency and Performance

Handbook of Food Preservation

Dehydration of Foods

Production, Postharvest Science, Processing Technology and Nutrition

Handbook of Fruits and Fruit Processing

Hand Book Of Packaging Technology

This multicultural and interdisciplinary reference brings a fresh social and cultural perspective to the global history of food, foodstuffs, and cultural exchange from the age of discovery to contemporary times. Comprehensive in scope, this two-volume encyclopedia covers agriculture and industry, food preparation and regional cuisines, science and technology, nutrition and health, and trade and commerce, as well as key contemporary issues such as famine relief, farm subsidies, food safety, and the organic movement. Articles also include specific foodstuffs such as chocolate, potatoes, and tomatoes; topics such as Mediterranean diet and the Spice Route; and pivotal figures such as Marco Polo, Columbus, and Catherine de' Medici. Special features include: dozens of recipes representing different historic periods and cuisines of the world; listing of herbal foods and uses; and a chronology of key events/people in food history.

Completely up-to-date and organized for easy use, this one-of-a-kind reference integrates basic concepts with hands-on techniques for food dehydration. It discusses a wide range of scientific and technical information, from the physical, chemical, and microbiological changes in food dehydration to its packaging aspects.

Part 1 of this collection assesses the causes of postharvest losses. Part 2 reviews advances in storage technologies, including management of insect pests using techniques such as fumigation, controlled atmospheres and biopesticides, as well as control of fungal contamination.

A complete guide to the evolving methods by which we may recover by-products and significantly reduce food waste Around the globe, one third of cereals and almost half of all fruits and vegetables go to waste. The cost of such waste – both to economies and to the environment – is a serious and increasing concern within the food industry. If we are to overcome this crisis and move towards a sustainable future, we must do everything possible to utilize innovative new methods of extracting and processing valuable by-products of all kinds. Food Wastes and By-products represents a complete primer to this important and complex process. Edited and written by leading researchers, the text provides essential information on the supply of waste and its composition, identifies foods rich in valuable bioactive compounds, and explores revolutionary methods for creating by-products from fruit, vegetable, and seed waste. Other chapters discuss the nutraceutical properties of value-added by-products and their uses in the manufacturing of dietary fibers, food flavors, supplements, pectin, and more. This book: Explains how reconstituted by-products can best be used to radically reduce food waste Discusses the potential nutraceutical assets of recovered food waste Covers a broad range of by-product sources, such as mangos, cacao, flaxseed, and spent coffee grounds Describes novel extraction processes and the emerging use of nanotechnology A significant contribution to the field, Food Wastes and By-products is a timely and essential resource for food industry professionals, government agencies and NGOs involved in nutrition, agriculture, and food production, and university instructors and students in related areas.

Agricultural Systems Management

Theory and Practice

Postharvest Technology of Perishable Horticultural Commodities

Handbook of Drying for Dairy Products

Food Losses, Sustainable Postharvest and Food Technologies

The Commercial Storage of Fruits, Vegetables, and Florist and Nursery Stocks

Postharvest Technology of Perishable Horticultural Commodities describes all the postharvest techniques and technologies available to handle perishable horticultural food commodities. It includes basic concepts and important new advances in the subject. Adopting a thematic style, chapters are organized by type of treatment, with sections devoted to postharvest risk factors and their amelioration. Written by experts from around the world, the book provides core insights into identifying and utilizing appropriate postharvest options for maximum results. Presents the most recent developments in processing technologies in a single volume Includes a wide range of perishable products, thus allowing for translational insight Appropriate for students and professionals Written by experts as a reference resource

The processing of food is no longer simple or straightforward, but is now a highly inter-disciplinary science. A number of new techniques have developed to extend shelf-life, minimize risk, protect the environment, and improve functional, sensory, and nutritional properties. Since 1999 when the first edition of this book was published, it has facilitated readers' understanding of the methods, technology, and science involved in the manipulation of conventional and newer sophisticated food preservation methods. The Third Edition of the Handbook of Food Preservation provides a basic background in postharvest technology for foods of plant and animal origin, presenting preservation technology of minimally processed foods and hurdle technology or combined methods of preservation. Each chapter compiles the mode of food preservation, basic terminology, and sequential steps of treatments, including types of equipment required. In addition, chapters present how preservation method affects the products, reaction kinetics and selected prediction models related to food stability, what conditions need be applied for best quality and safety, and applications of these preservation methods in different food products. This book emphasizes practical, cost-effective, and safe strategies for implementing preservation techniques for wide varieties of food products. Features: Includes extensive overview on the postharvest handling and treatments for foods of plants and animal origin Describes comprehensive preservation methods using chemicals and microbes, such as fermentation, antimicrobials, antioxidants, pH-lowering, and nitrite Explains comprehensive preservation by controlling of water, structure and atmosphere, such as water activity, glass transition, state diagram, drying, smoking, edible coating, encapsulation and controlled release Describes preservation methods using conventional heat and other forms of energy, such as microwave, ultrasound, ohmic heating, light, irradiation, pulsed electric field, high pressure, and magnetic field Revised, updated, and expanded with 18 new chapters, the Handbook of Food Preservation, Third Edition, remains the definitive resource on food preservation and is useful for practicing industrial and academic food scientists, technologists, and engineers.

Principles and Practice

Agronomic Crops

Crop Post-Harvest: Science and Technology, Volume 1

Volume 1: Production Technologies