

Postharvest Management Of Fruit And Vegetables

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 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, preharvest factors, food safety, and biotechnology and molecular biology.

Updates the introductory textbook on the principles and practice of the postharvest handling and storage of fresh fruit and vegetables. For technical college and university courses, workers in related industries, and interested consumers. Written in Australia, but about products grown worldwide. Ann

"A Handbook on Post Harvest Management of Fruits and Vegetables" deals with the scientific approach to post harvest management of fresh fruits and vegetables with the intention to minimize the post harvest losses. It is a compilation of informations on various aspects of post harvest technology in to a simple handbook. Separate chapters on the importance of harvesting indices of various fruits and vegetables, methods of harvesting, importance of washing and various techniques and types of machines used for washing are covered in the earlier chapters with tables and pictures. Importance of packing fresh fruits and vegetables, its comparative merits and demerits of each material, pre-treatments of fruits and vegetables, different storage techniques and hazards during transportation are covered in the later chapters. This is a brief and valid handbook highly suitable for the students and research workers in the field of Horticulture, Agriculture and Food Science and Technology who are doing post harvest aspect of fruit and vegetables and also those who are engaged in fresh fruits and vegetable handling, packaging and marketing.

POSTHARVEST PATHOGENS AND DISEASE MANAGEMENT Postharvest diseases caused by microbial pathogens account formillions of dollars in losses of both durable and perishableproduce products every year. Moreover, with consumers increasinglydemanding minimally processed vegetables and fruits--which can beinvaded by human pathogens--there is an imperative need forsuitable protective measures to provide pathogen-free commoditiesthat are free from, or contain only acceptable levels of, chemicalresidues. Providing details of both conventional and modern moleculartechniques applicable for the detection, identification, anddifferentiation of field and storage microbial pathogens,Postharvest Pathogens and Disease Management: * Discusses diseases of both durables and perishables duringtransit and storage * Provides a basic understanding of the effects of handling andstorage practices as well as field conditions and productsusceptibility on the development of postharvest diseases * Reveals, as a cautionary note, the potential hazards ofmycotoxins with carcinogenic properties that can contaminate fruitsand vegetables * Contains detailed information derived from elucidative evidenceand disease data in order to explain the infection process andsubsequent stages of disease development * Helps readers to avoid conditions that favor disease incidenceand spread * Includes real life examples of disease management strategies tohelp readers develop effective disease management systems suitablefor different ecosystems * Emphasizes the importance of integrating several differenteffective methods in tandem, including the development of cultivarswith resistance to postharvest diseases; the selection of suitableanalytical methods; and the effective use of biocontrol agents andchemicals * Presents protocols for numerous techniques and basic methods,making the book a distinctive and highly useful teaching andresearch tool Postharvest Pathogens and Disease Management offers readers insightinto the principles and methods of avoiding and managingpostharvest diseases of fruit and vegetable products in anefficient, economical, and environmentally feasible manner,allowing producers to sell safer, higher-quality produce to thepublic and prevent the losses associated with postharvest disease.

Advances in Postharvest Fruit and Vegetable Technology examines how changes in community attitudes and associated pressures on industry are demanding changes in the way technology is used to minimize postharvest loss and maintain product quality. In particular, the book discusses important drivers for change, including: Using more natural chemicals or physical treatments to replace synthetic chemicals Increasing the efficiency of older, more traditional methods in combination with newer biocontrol treatments Leveraging a range of biomolecular research tools or "omics" to efficiently gather and assess mass information at molecular, enzymic, and genetic levels Using modelling systems to identify key changes and control points for better targeting of new treatments and solutions to postharvest problems The postharvest handling of fresh fruits and vegetables plays a critical role in facilitating a continuous supply of high-quality fresh produce to the consumer. Many new technologies developed and refined in recent years continue to make possible an ever-expanding supply of fresh products. This volume examines a range of recently developed technologies and systems that will help the horticulture industry to become more environmentally sustainable and economically competitive, and to minimize postharvest quality loss and generate products that are appealing and acceptable to consumers.

While products such as bananas, pineapples, kiwifruit and citrus have long been available to consumers in temperate zones, new fruits such as lychee, longan, carambola, and mangosteen are now also entering the market. Confirmation of the health benefits of tropical and subtropical fruit may also promote consumption further. Tropical and subtropical fruits are particularly vulnerable to postharvest losses, and are also transported long distances for sale. Therefore maximising their quality postharvest is essential and there have been many recent advances in this area. Many tropical fruits are processed further into purees, juices and other value-added products, so quality optimization of processed products is also important. The books cover current state-of-the-art and emerging post-harvest and processing technologies. Volume 1 contains chapters on particular production stages and issues, whereas Volumes 2, 3 and 4 contain chapters focused on particular fruit. Chapters in Volume 3 of this important collection review factors affecting the quality of different tropical and subtropical fruits, concentrating on postharvest biology and technology. Important issues relevant to each specific product are discussed, such as postharvest physiology, preharvest factors affecting postharvest quality, quality maintenance postharvest, pests and diseases and value-added processed products, among other topics. Along with the other volumes in the collection, Volume 3 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. Covers current state-of-the-art and emerging post-harvest and processing technologies Important issues relevant to each particular fruit are discussed, such as postharvest physiology, preharvest factors affecting postharvest quality and pests and diseases

Written by a diverse group of research professionals, *Postharvest Decay: Control Strategies* is aimed at a wide audience, including researchers involved in the study of postharvest handling of agricultural commodities, and undergraduate and graduate students researching postharvest topics. Growers, managers, and operators working at packinghouses and storage, retail, and wholesale facilities can also benefit from this book. The information in this book covers a wide range of topics related to selected fungi, such as taxonomy, infection processes, economic importance, causes of infection, the influence of pre-harvest agronomic practices and the environment, the effect of handling operations, and the strategic controls for each host-pathogen, including traditional and non-traditional alternatives. Includes eleven postharvest fungi causing serious rots in numerous fruits and vegetables Offers selected microorganisms including pathogens of commercially important tropical, subtropical and temperate crops worldwide, such as tomatoes, pears, apples, peaches, citrus, banana, papaya, and mango, among others Presents content developed by recognized and experienced high-level scientists, working in the postharvest pathology area worldwide Provides basic information about each fungus, pre- and postharvest factors that contribute to infection and control measurements, including the use of chemicals and non-traditional methods

On post harvest management technologies with special reference to India.

Postharvest Physiology and Biochemistry of Fruits and Vegetables presents an updated, interrelated and sequenced view of the contribution of fruits and vegetables on human health, their aspects of plant metabolism, physical and chemical/compositional changes during the entire fruit development lifecycle, the physiological disorders and biochemical effects of modified/controlled atmospheres, and the biotechnology of horticultural crops. The book is written specifically for those interested in preharvest and postharvest crop science and the impact of physiological and biochemical changes on their roles as functional foods. Deals with the developmental aspects of the lifecycle in whole fruits Describes issues, such as the morphology and anatomy of fruits, beginning with the structural organization of the whole plant and explaining the fruit structure and its botanical classification Addresses biotechnological concepts that control firmness, quality and the nutritional value of fruits

Postharvest Disinfection of Fruits and Vegetables describes available technologies to reduce microbial infection for maintaining postharvest quality and safety. The book analyzes alternative and traditional methodologies and points out the significant advantages and limitations of each technique, thus facilitating both cost and time savings. This reference is for anyone in the fresh produce industry who is involved in postharvest handling and management. It discusses, in detail, the latest disinfection approaches, low-cost treatment strategies, management and protocols to control fresh produce qualities, diseases and insect infestation. Includes methods to reduce microbial contamination using chlorination, ozone, pulsed light, irradiation and plasma technology Provides practical applications of recently developed, natural anti-microbial agents for eco-friendly and sustainable solutions Explores various disinfection technologies for quality assurance and for the development of potential new technologies

Postharvest is an important element of getting fresh, high-quality fruit to the consumer and technological advances continue to outpace infrastructure. This book provides valuable, up-to-date information on postharvest handling of seven fruit and nut crops: almond, fig, peach, persimmon, pistachio, pomegranate and table grape. These crops are of particular importance in the Mediterranean region, but also to those countries that export and import these crops, where intensive economic resources are dedicated to developing information to understand and solve their postharvest problems. Written by a team of internationally-recognized postharvest experts, this manual collates and verifies essential, but often difficult to access, information on these important crops, that is pertinent to the world's agricultural economy and affects agricultural communities.

A Handbook on Post Harvest Management of Fruits and Vegetables

Postharvest losses remain a serious problem in the fresh produce sector. This collection reviews advances in preservation and disinfection, monitoring and management techniques to optimise safety and quality of fresh fruit and vegetables.

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

Irradiation for Quality Improvement, Microbial Safety and Phytosanitation of Fresh Produce presents the last six and a half decades of scientific information on the topic. This book emphasizes proven advantages of ionizing irradiation over the commonly used postharvest treatments for improving postharvest life of fresh fruits and vegetables to enhance their microbial safety. This reference is intended for a wide range of scientists, researchers, and students in the fields of plant diseases and postharvest diseases of fruits and vegetables. It is a means for disease control to promote food safety and quality for the food industry and can be used in food safety and agriculture courses. Discusses pathogen resistance to common chemical synthetic compounds Presents up-to-date research and benefits of phytosanitary irradiation Includes comprehensive research for alternative treatments for postharvest disease control Provides the non-residual feature of ionizing radiation as a physical means for disease control to produce chemical free foods

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.

The world population has been increasing day by day, and demand for food is rising. Despite that, the natural resources are decreasing, and production of food is getting difficult. At the same time, about one-quarter of what is produced never reaches the consumers due to the postharvest losses. Therefore, it is of utmost importance to efficiently handle, store, and utilize produce to be able to feed the world, reduce the use of natural resources, and help to ensure sustainability. At this point, postharvest handling is becoming more important, which is the main determinant of the postharvest losses. Hence, the present book is intended to provide useful and scientific information about postharvest handling of different produce.

Focusing on the great variety of research being done in the field of postharvest pathology, this volume presents a collection of topics concerning the diseases of harvested fruits and vegetables. Each chapter represents a separate unit which taken together create a better understanding of the whole subject. Topics include the causal agents of postharvest diseases of fruits and vegetables, their sources and their ways of penetration into the host; factors that may accelerate the development of the pathogen in the host - and those that suppress them; a list of the main pathogens of fruits and vegetables, their hosts and the diseases elicited by them; and a detailed description of the major diseases of selected groups of fruits and solanaceous vegetable fruits. Attack mechanisms of pathogens and defense mechanisms of the host are examined as are treatments aimed at suppressing postharvest diseases. The search for natural and safe chemical compounds and the variety of alternative physical and biological methods for use in postharvest disease control are emphasized. Teachers and students who focus on postharvest pathology, scientists in research institutes, companies dealing with fruit and vegetable preservation technologies and for all those striving to improve the quality of harvested fruits and vegetables will find this book of great interest.

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 vegetable by mitigating the causes of deterioration 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 and their role in cold storage 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.

This comprehensive guide covers the harvesting, handling, packaging, storage, ripening and transportation of fruit and vegetables ensuring they reach the retailer in the optimum condition with the minimum of loss and spoilage. It provides all the practical and technical information needed by the produce industry.

The book post harvest technology assumes great attention during recent years since preservation of agricultural produce is a basic necessity to sustain agricultural production. It helps to add value of produce, thus having great scope for employment generation at the production catchments. In this book, the authors have attempted to consolidate different methods of post harvest technology of fruits and vegetables focusing on recent advances. This book will benefit both practicing food technologist/post harvest technologist who are searching for answers to critical technical questions of post harvest technology. Further, it will be useful to agricultural engineers, food processors, food scientist, researchers and progressive farmers and to those who are working in relevant fields. It is intended to fill a gap in presently available post harvest technology literature.

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.

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 focus on post harvest management skills. Note: T&F does not sell or distribute the hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka.

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

Postharvest is an essential handbook for students, practitioners and growers wanting to understand the science and technology of the harvesting, handling, storage and transport of fruit and vegetables to the consumer. This sixth edition has been substantially revised to capture the current and future trends in postharvest technology, and to help the industry meet the constantly evolving needs and expectations of consumers.

This book mainly deals with pre- and postharvest management practices of the strawberry to ensure that high-quality fruits are delivered to the consumer. The influence of climatic variables, cultural practices, harvesting techniques, and use of chemicals and other natural compounds on fruit quality are discussed. Factors affecting fruit growth and development and processes regarding maturation and biochemical changes during fruit ripening are also presented in one of the chapters of this book. Some chapters provide information regarding harvesting, storing, packaging, transporting, and also selling that affect strawberry quality greatly. Enhancement of yield and antioxidant contents in the strawberry by various natural products, including chitosan and probiotic bacterial, are also included in this book. The final chapter states that antioxidants present in strawberry fruit play a dietary role in alleviating oxidative stress in experimental liver models. This book focuses on the postharvest quality management of the strawberry and provides a useful resource to educationists, traders, and commercial strawberry growers.

This book presents several pre- and postharvest strategies that have been developed to modify these physiological activities, resulting in increased shelf life. The book also discusses the best technologies that positively influence quality attributes of the produce, including senescence changes and, afterwards, the consumers' decision to purchase the product in the marketplace. With contributions from experts with experience in both developed and developing regions, the book includes chapters covering thorough discussions on postharvest management strategies of fresh horticultural commodities.

This book provides unparalleled integration of fundamentals and most advanced management to make this strawberry crop highly remunerative besides enhancing per capita availability of fruit even in the non-traditional regions of the world.

This book presents a comprehensive study of the handling of fresh fruits in the developing world from harvesting to the shelf. With annual losses ranging from 30-40% due to lack of knowledge on proper handling practices and value addition, this book's information on postharvest handling and quality testing is crucial for reducing these losses and improving the quality and safety of fresh fruits in these areas. With its added focus on marketing and organized retail aspects, Postharvest Quality Assurance of Fruits: Practical Approaches for Developing Countries covers the entire range of fruit handling, from transportation and packaging to quality assessment and commercial preparation. In presenting a fully comprehensive outline of the factors affecting postharvest quality and marketability of fruits, this work lays the foundation for understanding the proper storage, transportation and packaging methods to prevent losses and increase quality. With its study of prevailing marketing systems, supply chains and retail methods, the book presents the complete picture for the postharvest handling of fruits in the developing world.

In Indian context.

Consumption of fresh fruits and vegetables has increased dramatically in the last several decades. This increased consumption has put a greater burden on the fresh produce industry to provide fresher product quality, combined with a high level of food safety. Therefore, postharvest handling, storage and shipment of horticultural crops, including fruit and vegetable products has increased in importance. Novel Postharvest Treatments of Fresh Produce focuses mainly on the application of novel treatments for fruits and vegetables shipping and handling life. A greater emphasis is placed on effects of postharvest treatments on senescence and ripening, bioactive molecule contents and food safety. The work presented within this book explores a wide range of topics pertaining to novel postharvest treatments for fresh and fresh-cut fruits and vegetables including applications of various active agents, green postharvest treatments, physical treatments and combinations of the aforementioned.

Preharvest Modulation of Postharvest Fruit and Vegetable Quality is the first book to focus on the potential yield quality, quantity and safety benefits of intervention during growth. Of the many factors responsible for overall quality of produce, about 70 percent comes from pre-harvest conditions. Written by an international team of experts, this book presents the key opportunities and challenges of pre-harvest interventions. From selecting the most appropriate growing scenario, to treating plants during the maturation process, to evaluating for quality factors to determine appropriate interventions, this book provides an integrated look at maximizing crop yield through preventative means. In fact, with the very best of postharvest knowledge and technologies available, the best that can be achieved is a reduction in the rate at which products deteriorate as they progress through their normal developmental pattern of maturation, ripening and senescence. Therefore, it is very important to understand what pre-harvest factors influence the many important harvest quality attributes that affect the rate of postharvest deterioration and, subsequently, the consumers' decision to purchase the product in the marketplace. Presents the important pre-harvest factors that influence harvest quality Includes up-to-date information on pre-harvest factors that modulate post-harvest biology Identifies potential methodologies and technologies to enhance pre-harvest interventions

With the increasing need and demand for fresh fruits and vegetables, the field of postharvest science is continuously evolving. Endeavors are being made by scientists involved in postharvest research for maintenance of the quality and safety of fresh horticultural produce to enhance the postharvest life and to extend the availability of the produce in both time and space. This volume, Emerging Postharvest Treatment of Fruits and Vegetables, addresses the demand for the development and application of effective technologies for preservation of perishable food products, particularly fresh fruits and vegetables. It

provides an abundance of up-to-date information about postharvest treatments. The chapters discuss a number of innovative technologies to prolong and enhance postharvest fruits and vegetables. This book will be valuable for those concerned with horticulture and postharvest technology. It provides essential information for students, teachers, professors, scientists, and entrepreneurs engaged in fresh horticultural produce handling related to this field.

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. 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

Post harvest biology and technology of citrus fruits is gaining importance as the therapeutic value of citrus fruits is realized and supported by the increase in health awareness among the general public. This book is the most comprehensive reference on citrus fruit biology, biotechnology and quality. Basic and applied scientific information is interwoven to serve the researcher, marketer, scientist, nutritionist, or dietician. With discussions of fruit morphology, anatomy, physiology and biochemistry and chapters on growth phases, maturity standards, grades and physical and mechanical characteristics of citrus trees, this book provides the foundation for understanding growth, harvest and post harvest aspects of these important plants. Insect-pests and diseases, irrigation, nutrition and rootstocks are also addressed. * Provides practical tips for post harvest management. * Includes all aspects of citrus fruit biology, technology and quality evaluation. * Discusses biotechnological applications and potential fresh citrus fruit quality improvement * Evaluates medicinal and therapeutic applications and recent clinical findings * Exhaustive glossary included

Postharvest Handling and Diseases of Horticultural Produce describes all the postharvest techniques, handling, pre-cooling, postharvest treatment, edible coating and storage of the horticultural produce available to handle perishable horticultural food commodities, covering the areas of horticulture, agricultural process engineering, postharvest technology, plant pathology and microbiology. Postharvest diseases of major fruits and vegetables, with their causal agents, are described. The integrative strategies for management of postharvest diseases include effectively inhibiting the growth of pathogens, enhancing the resistance of hosts and improving environmental conditions, with results that are favourable to the host and unfavourable to the pathogen growth including biotechnological approaches. Adopting a thematic style, chapters are organized by type of treatment, with sections devoted to postharvest risk factors and their amelioration. The chapters are written by experts in the fields of plant pathology, horticulture, food science etc., and core insights into identifying and utilizing appropriate postharvest options for minimizing postharvest losses and enhancing benefits to end-users are provided. Features Presents the most recent developments in the field of postharvest handling technologies and diseases in a single volume Includes postharvest diseases of cut flowers, fruits, vegetables and tuber crops. Appropriate for students, researchers and professionals Written by experts and can be used as a reference resource

Postharvest Ripening Physiology of Crops is a comprehensive interdisciplinary reference source for the various aspects of fruit ripening and postharvest behavior. It focuses on the postharvest physiology, biochemistry, and molecular biology of ripening and provides an overview of fruits and vegetables, including chapters on the postharvest quality of ornamental plants and molecular biology of flower senescence. It describes various developments that have taken place in the last decade with respect to identifying and altering the function of ripening-related genes. Taking clues from studies in grape and tomato as model fruits, the book reviews a few case studies and gives you a detailed account of molecular regulation of fruit ripening, and signal transduction and internal atmospheres in relation to fruit ripening. It also presents an overview of methods utilized in fruit proteomics, as well as a global proteome and systems biology analysis of fruits during ripening, and discusses the basics of dormancy, its molecular and physiological basis, and methods to break the dormancy. The book provides an overview of the most important metabolic pathways and genes that control volatile biosynthesis in model fruits, including tropical, subtropical, and temperate fruits, with a special emphasis on fruit ripening and the role of ethylene during this process. It presents a brief description of the composition of volatiles in various fruit species and addresses the influences of preharvest factors and postharvest technologies on fruit aroma, basic mechanisms responsible for postharvest flavor change in fresh produce, and the potential impacts of various postharvest technologies on flavor.

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