Postharvest Handling And Safety Of Perishable Crops

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. The book will address selected topics in postharvest pathology aiming at highlighting recent development in the science, technology and control strategies of postharvest diseases to reduce losses and enhance safety of harvested agricultural products. Topics will include: 1) Introduction: Perspectives and challenges in postharvest pathology 2) Elucidating host-pathogen interactions 3) Next generation technologies for management and detection of postharvest pathogens 4) Food safety in postharvest pathology 5) Alternative postharvest diseases control strategies 6) Chemical control of postharvest diseases.

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.

Consideration of the interactions between decisions made at one point in the supply chain and its effects on the subsequent stages is the core concept of a systems approach. Postharvest Handling is unique in its application of this systems approach to the handling of fruits and vegetables, exploring multiple aspects of this important process through chapters written by experts from a variety of backgrounds. Newly updated and revised, this second edition includes coverage of the logistics of fresh produce from multiple perspectives, postharvest handling under varying weather conditions, quality control, changes in consumer eating habits and other factors key to successful postharvest handling. The ideal book for understanding the economic as well as physical impacts of postharvest handling decisions. Key Features: *Features contributions from leading experts providing a variety of perspectives *Updated with 12 new chapters *Focuses on application-based information for practical implementation *System approach is unique in the handling of fruits and vegetables

Dates are an important fruit, especially in many African, Middle-Eastern and Asian countries. In recent years this fruit has gained significant importance in terms of global commerce. During the period 1990–2009, global production of dates saw an increase of 219% and this trend is expected to continue as per FAO projections. Some of the major challenges confronting date fruit production and commerce are issues related to postharvest handling technologies, use of appropriate processing and packaging technologies, food safety aspects and quality assurance. Dates: Postharvest Science, Processing Technology and Health Benefits provides contemporary information that brings together current knowledge and practices in the value chain of dates, from
production through to consumption. The important book published by Wiley Blackwell features coverage from leading experts on innovative processing technologies, packaging, quality management and pest control for dates. It is the only book to address the science and technology of the postharvest production of dates, a commercially important and growing sector of the food industry. Emphasis in agricultural research for many years has concentrated on crop production. This emphasis has become more important in recent years with the realization that the population worldwide is outstripping the food supply. There is, however, another side to increasing the availability of the food supply. This simply involves preservation of the harvested crop for human consumption. The losses incurred in harvesting, handling, transportation, storage and marketing crops have become a greater problem as the distance from the farm to the ultimate consumer increases. In the Western world where modern transportation, storage facilities, and marketing technology are widely used, post-harvest technology requires a large input of energy which increases costs considerably. Therefore, losses are more significant and the ability to provide fresh fruits and vegetables, out of season, at reasonable costs will depend on reduced post-harvest losses throughout the marketing chain from the farm gate to the ultimate consumer. The reduction in post-harvest losses depends on proper use of current technology and further developments derived from a broad spectrum of scientific disciplines. Biochemistry, plant physiology, plant pathology, horticulture, agronomy, physics, engineering and agricultural economics, all provide knowledge which has been useful and will be useful in the future for improving post-harvest technology and crop preservation. This volume records the Proceedings of the NATO Advanced Study Institute on Post-Harvest Physiology and Crop Preservation, held at Sounion, Greece, April 28 - May 8, 1981. 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. 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.

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 in today’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 the systems used in post-harvest agricultural processes, physical and biological factors affecting post-harvest commodities, storage issues, pest management, food processing and preservation, food systems, the latest research and assimilation of this work, and current trade and international agreements. An invaluable glossary showing important pests, pathogens and plants is also included. Crop Post-Harvest: Science and Technology Volume 1: Principles and Practice is a must-have reference book which offers the reader an overview of the globalisation of post-harvest science, technology, economics, and the development of the storage and handling of perishable and durable products. Volumes 2 and 3 will go on to explore durables and perishables individually in more detail, with many case studies taken from around the globe. This 3-volume work is the standard handbook and reference for all professionals involved in the harvesting, shipping, storage and handling of perishable and durable products. Volumes 2 and 3 will go on to explore durables and perishables individually in more detail, with many case studies taken from around the globe. This 3-volume work is the standard handbook and reference for all professionals involved in the harvesting, shipping, storage and handling of perishable and durable products in the developing 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.

Since its publication in 1994, the Small Farm Handbook has been an essential resource for California’s small farmers and the agricultural professionals advising them – selling over 4300 copies. Now this invaluable reference has been updated and expanded for today’s small-scale producers. The handbook covers three essential areas: Background skills and knowledge, the business side, and the farming side. Within these broad areas you’ll find specific chapters on: Requirements for Successful Farming Growing Crops Raising Animals Farm and Financial Management Marketing and Product Sales Labor Management Also included are profiles of six small farm operators representing a
sample of California’s diverse agriculture. Throughout you’ll get a look at emerging trends and issues for California agriculture and innovative methods for better production and management, all of which can lead to better farm performance. Drawing upon the knowledge of 32 experts from the University of California, No other publication covers the topics, issues, and facets of California’s small-scale agriculture with this depth or level of expertise. From the basics to risk management, specialty crops to marketing and product sales, this guide covers the gamut.

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

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 serves 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.

While presenting the latest scientific research on the major pathogens associated with meat, poultry, produce, and other foods, Pre-Harvest and Post-Harvest Food Safety: Contemporary Issues and Future Directions goes beyond other professional reference books by identifying the research needed to assure food safety in the future. The editors and authors not only review the current, cutting-edge literature in each of their areas, but provide insights and forward thinking into the development of new and innovative approaches and research strategies. Scientists and researchers from academia, government, and industry have collaborated to examine the high-priority food safety areas recognized by the federal government: pathogen/host interactions; ecology, distribution and spread of foodborne hazards; antibiotic resistance; verification tests; decontamination and prevention strategies; and risk analysis. A worthy new edition to the IFT Press series of food science and technology titles, Pre-Harvest and Post-Harvest Food Safety describes what we now know in food safety and provides a framework and focus for future research to improve diagnostic
capabilities and intervention strategies for enteropathogens.
Starting in the 1940s, humans have aimed to increase agricultural productivity. However, along with the benefits gained, there have been several criticisms since the 1970s, especially about food security and environmental impacts. Nowadays, the demand for food is increasing while the quantity and quality of agricultural production is declining due to human-induced environmental problems, i.e. climate change and water scarcity. Moreover, our modern fruit industry needs to improve quality and quantity of fruit production while also protecting ecosystems by reducing environmental impacts. Hence, this book intends to provide the reader with a comprehensive overview of the new and eco-friendly technologies in the modern fruit industry.

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.

Postharvest losses of fresh produce have always been an obstacle in agriculture. About one third of global fresh fruits and vegetables are lost because their quality has dropped below an acceptance limit. The postharvest quality and shelf life of fresh produce are also determined before harvest. However, postharvest quality is also affected by many practices during and after harvest such as temperature management, controlled and modified atmosphere, coatings, physical treatments, biocontrol, and more. This Special Issue on “Postharvest Disease Development: Pre and/or Postharvest Practices” gathers papers that deal with preharvest and postharvest factors that affect and maintain fresh produce quality after harvest.

International trade in high value perishables has grown enormously in the past few decades. In the developed world consumers now expect to be able to eat perishable produce from all parts of the world, and in most cases throughout the year. Perishable plant products are, however, susceptible to physical damage and often have a potential storage life of only a few days. Given their key importance in the world economy, Crop Post-Harvest Science and Technology: Perishables devotes itself to perishable produce, providing current and comprehensive knowledge on all the key factors affecting post-harvest quality of fruits and vegetables. This volume focuses explicitly on the effects and causes of deterioration, as well as the many techniques and practices implemented to maintain quality though correct handling and storage. As highlighted throughout, regular losses caused by post-harvest spoilage of perishable products can be as much as 50%. A complete understanding, as provided by this excellent volume, is therefore vital in helping to reduce these losses by a significant percentage. Compiled by members of the world-renowned Natural Resources Institute at the United Kingdom's University of Greenwich, with contributions from experts around the world, this volume is an essential reference for all those working in the area. Researchers and upper-level students in food
science, food technology, post-harvest science and technology, crop protection, applied biology and plant and agricultural sciences will benefit from this landmark publication. Libraries in all research establishments and universities where these subjects are studied and taught should ensure that they have several copies for their shelves.

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. Durable commodities are the raw products from which food can be made and are the staples on which most humans rely; with but a few exceptions they are the seeds of plants. Volume 1 of this groundbreaking book series (details below) explains how crops should be dried, handled, protected from pests and stored by smaller holders or large-scale enterprises. This second volume presents a series of case studies on how durable crops are actually stored and marketed. The compilation of this three-volume work has been supported and is endorsed by the Natural Resources Institute of the University of Greenwich, U.K. The editors of this comprehensive and thorough book are well known and respected in the world of post-harvest science and technology. They have drawn together 36 expert contributors from Europe, North America, Asia, Australasia, South America and Africa to provide a huge wealth of information on major world crops including rice, maize, wheat, barley, sorghum, beans, cowpea, oilseeds, peanuts, copra, coffee, cocoa, dried fruit and nuts, and dried fish. Crop Post Harvest, Volume 2 is an essential purchase for cereal technologists, food scientists and technologists, agricultural scientists, entomologists, post-harvest crop protection specialists and consultants, commercial growers, shippers and warehousing operatives, and personnel of packaging companies. Researchers and upper-level students in food science, food technology, post-harvest science and technology, crop protection, applied biology, and plant and agricultural sciences will find a huge amount of great use within this landmark publication and the three-volume series as a whole. All libraries in research establishments and universities where these subjects are studied and taught should have several copies of each on their shelves.

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.

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.

The conference papers arising from this workshop provide an opportunity to fully report on the ACIAR project on post-harvest handling of leafy vegetables, exploring its outcomes as well as introducing new research challenges.

The banana is the world’s fourth major fruit crop. Grown in around 1200 varieties and across more than 130 countries, this highly nutritious source of fiber, vitamins, and minerals is the 8th most popular starchy foodstuff in the world, with a per-capita consumption rate of approximately 0.5kg/day in Latin America and more than 1kg/day in East Africa. The USA, Belgium, Germany, Japan, and the Russian Federation are all world-leading importers of bananas. "Handbook of Banana Production, Postharvest Science, Processing Technology, and Nutrition" gives a unique and in-depth overview of the banana’s value chain, charting its progression from production through to harvest, postharvest, processing, and consumption. Drawing together current knowledge and practices, the book will provide information on innovative storage, processing, and packaging technologies, as well outlining fresh approaches to quality management and the value-added utilization of banana by-products. Additionally, the fruit’s physiology and nutritional value will be examined, with potential diseases and pests addresses in detail, and the presence and potential effects of bioactive and phytochemical compounds identified and explained. No existing book offers as comprehensive and far-reaching coverage of the banana in all its varieties. Furthermore, health-benefitting bioactive compounds – especially antioxidants – have emerged as an important research area in recent years, and there has not yet been a book published that has discussed this topic as it concerns bananas.

"Horticultural crops not only provide nutritional and healthy foods to human beings, but also generate a considerable cash income for growers. However, horticultural crops typically have high moisture content, tender texture, and high perishability. If not handled properly, a high value nutritious product can deteriorate and rot in a matter of days or hours. Losses occur after harvesting is known as post-harvest losses. It starts first from the field, after harvest, in grading and packing areas, in storage, during transportation and in the wholesale and retail
markets. Several losses occur because of poor facilities, lack of know-how, poor management, market dysfunction or simply the carelessness of farmers. The most important goals of post-harvest handling are keeping the product cool, to avoid moisture loss and slow down undesirable chemical changes, and avoiding physical damage such as bruising, to delay spoilage. Sanitation is also an important factor, to reduce the possibility of pathogens that could be carried by fresh produce, for example, as residue from contaminated washing water. Healthy seeds and grains are the demanding enterprise of the recent era for the production of high yield in the next season. The seeds must be stored for the maintenance of high-yielding crop. During storage, major losses of seeds are caused by various biological and nonbiological factors. There is a need to examine reasonable factors of these crop losses, which ultimately affect the market value and quality of the seed. The quality of seeds can be maintained by using careful postharvest handling techniques. There is need to establish the well-suited methods to assess the losses during the process and to use the best technique to minimize the loss and to ensure the quality and safety of the crop. Importance of Postharvest Technology lies in the fact that it has capability to meet food requirement of growing world population by eliminating avoidable losses making more nutritive food items with higher values by proper processing, storage, packaging, transport and marketing. This book Post Harvest Technology covers postharvest food preservation and processing methods, with an emphasis on grains. It emphasizes on the aspects and postharvest techniques that are used to maintain seed quality. A comprehensive review of the better, economical, convenient, and productive methods is provided, focused on the needs of developing countries but also with relevance in more industrialized countries."

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

Food Science and Technology: Trends and Future Prospects presents different aspects of food science i.e., food microbiology, food chemistry, nutrition, process engineering that should be applied for selection, preservation, processing, packaging, and distribution of quality food. The authors focus on the fundamental aspects of food and also highlight emerging technology and innovations that are changing the food industry. The chapters are written by leading researchers, lecturers, and experts in food chemistry, food microbiology, biotechnology, nutrition, and management. This book is valuable for researchers and students in food science and technology and it is also useful for food industry professionals, food entrepreneurs, and farmers.

Basic approaches to maintaining the safety and quality of horticultural produce are the same, regardless of the market to which this produce is targeted. This bulletin reviews the factors which contribute to quality and safety deterioration of
horticultural produce, and describes approaches to assuring the maintenance of quality and safety throughout the post-
harvest chain. Specific examples are given to illustrate the economic implications of investing in and applying proper post-
harvest technologies. Criteria for the assessment of post-harvest needs, the selection of post-harvest technologies
appropriate to the situation and context, and for extending appropriate levels of post-harvest information are also
discussed.

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.

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.

Microbial Safety of Fresh Produce covers all aspects of produce safety including pathogen ecology, agro-management,
pre-harvest and post-harvest interventions, and adverse economic impacts of outbreaks. This most recent edition to the
IFT Press book series examines the current state of the problems associated with fresh produce by reviewing the recent,
high-profile outbreaks associated with fresh-produce, including the possible internalization of pathogens by plant tissues,
and understanding how human pathogens survive and multiply in water, soils, and fresh fruits and vegetables.

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 Handling, Third Edition takes a global perspective in offering a system of measuring, monitoring, and managing produce processing to improve food quality, minimize food waste, reduce risks and uncertainties, and maximize time and resources. This unique resource provides an overview of the postharvest system and its role in the food value chain, and offers essential tools to monitor and control the handling process. It shows how to predict and combat unexpected events (e.g., spoilage), and manage the food quality and safety within a facility. Proven research methods and applications from various viewpoints are available to help you maintain high-quality produce and achieve the highest yields possible. The book also explores current challenges—including oversupply, waste, food safety, lack of resources, sustainability—and best practices for production to thrive in spite of these challenges. Presents current research methods and applications in temperature control and heat treatments to help minimize moisture content, to prevent spoilage and mold, and more Addresses challenges of traceability and sustainability Presents testing and measurement techniques and applications Provides technological tools to create crop value and improve both food safety and food quality

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