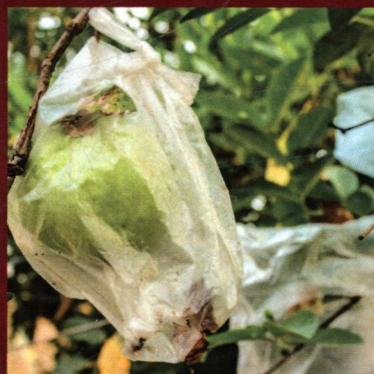


Preharvest Modulation of Postharvest Fruit and Vegetable Quality

Edited by

Mohammed Wasim Siddiqui



Preharvest Modulation of Postharvest Fruit and Vegetable Quality

Edited by **Mohammed Wasim Siddiqui, PhD**

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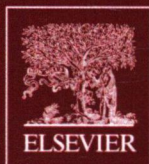
Preharvest Modulation of Postharvest Fruit and Vegetable Quality focuses on the potential yield quality, quantity, and safety benefits of intervention during growth. Among the several factors responsible for overall quality of produce, about 70% comes from preharvest conditions while only 30% postharvest factors affect the quality. 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 preharvest factors influence the many important harvest quality attributes affecting postharvest deterioration and subsequently, the consumers' decision to purchase the product in the market. *Preharvest Modulation of Postharvest Fruit and Vegetable Quality* is a unique addition to maintain and modify the postharvest quality of fresh produce in terms of safety and nutrition. The information provided within the text can be used to extend the shelf life of fruits and vegetables by retaining nutritional and cosmetic appeals.

Key Features

- Presents the preharvest factors that influence important harvest quality
- Includes up-to-date information on preharvest factors that modulate postharvest biology
- Identifies potential methodologies and technologies to enhance preharvest interventions

About the Editor

Dr. Mohammed Wasim Siddiqui is an established postharvest researcher, academic, and editor and presently affiliated to Department of Food Science and Post-Harvest Technology, Bihar Agricultural University, Sabour, India as an Assistant Professor and Scientist. He is an author or co-author of 36 peer reviewed research articles, more than 30 book chapters, and several conference papers. He has 18 books to his credit published by Elsevier, USA, CRC Press, USA, Springer, USA, & Apple Academic Press, USA. He is the founding editor of two book series namely *Postharvest Biology and Technology* and *Innovations in Horticultural Science* being published from Apple Academic Press, New Jersey, USA. He is an editorial board member and active reviewer of several international journals. Dr Siddiqui has received more than 15 awards and fellowships in recognition of research and teaching achievements from national and international organizations.



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Siddiqui



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Preharvest Modulation of
**POSTHARVEST FRUIT
AND VEGETABLE
QUALITY**

*For
my wife Dr. Fozia Homa
who deserves all the dedications*

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Dr. Siddiqui has received numerous awards and fellowships in recognition of research and teaching achievements. Recently, he is conferred with the Glory of India Award-2017, Best Researcher Award-2016, Best Citizens of India Award-2016, Bharat Jyoti Award-2016, Outstanding Researcher Award-2016, Best Young Researcher Award-2015, Young Scientist Award-2015, and the Young Achiever Award-2014 for the outstanding contribution in research and teaching from several organizations of national and international repute. He was also awarded Maulana Azad National Fellowship Award from the University Grants Commission, New Delhi, India. He is an Honorary Board Member and Life Time Author Society

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Dr. Siddiqui acquired BSc (Agriculture) degree from Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur, India. He received the MSc (Horticulture) and PhD. (Horticulture) degrees from Bidhan Chandra Krishi Viswavidyalaya, Mohanpur, Nadia, India with specialization in the Postharvest Biotechnology. He has received several grants from various funding agencies to carry out his research projects. He is dynamically indulged in teaching (graduate and doctorate students) and research, and he has proved himself as an active scientist in the area of Postharvest Biotechnology.

PREFACE

Maintaining postharvest quality of fruits and vegetables has become increasingly complicated due to growing global fresh produce trade, consumer fondness for variety, increasing awareness of valuable nutritional properties of fruits and vegetables, and price best for supplying off-season high-quality fresh produce.

Most of the developing countries have, however, been losing up to 30%–40% of the value of their fruit and vegetables due to inadequate postharvest handling and facing huge monetary losses. On the other hand, international markets usually reject shipments of fruit and vegetables having banned pesticidal residues beyond permissible limits. Appropriate approaches and technologies are needed to reduce postharvest losses in quantity and quality, as well as assure food safety between produce harvest and consumption.

Among the several factors responsible for overall quality of produce, about 70% comes from preharvest conditions while only 30% postharvest factors affect the quality. In fact, with the very best of postharvest knowledge and technologies available, the best that can be achieved is a reduction in the products' deterioration rate while their normal developmental stage, such as maturation, ripening, and senescence. Therefore, it is very important to understand what preharvest factors influence the many important harvest quality attributes affecting postharvest deterioration and subsequently, the consumers' decision to purchase the product in the market.

Although, substantial preharvest research has been carried out to preserve the quality of fresh horticultural produce, however, unfortunately, available information has not been summarized so far in a book and periodicals. With 16 comprehensive chapters written by a team of experts belonging to developed and developing world, the book *Preharvest Modulation of Postharvest Fruit and Vegetable Quality* is a maiden and unique addition to maintain/modify the postharvest quality of fresh produce in terms of safety and nutrition.

The editor is confident that this book will prove to be a unique reference work in the field of postharvest produce quality maintenance. The information can be used to extend the shelf life by retaining nutritional and cosmetic appeals of fresh fruits and vegetables. The editor would appreciate receiving new information and comments to assist in the future development of the next edition.

