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BOOK REVIEW

Mycotoxins in fruits and vegetables

R. Barkai-Golan and N. Paster

List price: 91.95 Euro / 110 USD

Hardcover: 408 pages, also available as ScienceDirect ebook

Publisher: Academic Press (Elsevier), San Diego, CA, USA (2008)

ISBN: 978-0123741264

Increasing research has recently been focused on basic aspects of mycotoxins in fruit and vegetables, and a book on 'Mycotoxins in fruit and vegetables,' dedicated to these aspects, published by Academic Press (Elsevier) and edited by Rivka Barkai-Golan and Nachman Paster, has been published (2008).

This multi-author book deals with the major mycotoxigenic fungi, which attack harvested fruits and vegetables – *Aspergillus*, *Penicillium* and *Alternaria* species – as well as the mycotoxins produced by these fungi in the host tissues, e.g., aflatoxins, ochratoxin A, patulin and *Alternaria* toxins. Most of these mycotoxins are highly stable during processing and, therefore, processed fruit products may still form a significant source of these mycotoxins posing a serious threat to human and animal health.

The book has 18 chapters written by 29 experts in the field of mycotoxins and mycotoxigenic fungi. The book systematically brings together subjects relevant to mycotoxin production and accumulation in fruits and vegetables, and ways for their prevention and control. Each chapter constitutes a separate unit. A good book is more than a collection of chapters. 'Mycotoxins in fruits and vegetables' is a story with a beginning, middle and end, whose continuity is relevant to gain insight into the diverse aspects of the whole subject.

The first two chapters of the book deal with risk assessment, safety evaluation, and economic aspects of mycotoxins in fruits and vegetables. These chapters are followed by descriptions of limits and regulations for mycotoxins in fruits and vegetables, which have been established in many countries to protect the consumer from the toxic effects of these mycotoxins. Chapters 4 and 5 focus on the variety of factors affecting mycotoxin production in fruits and vegetables, and describe the ability of mycotoxins to diffuse to some extent from the point of contamination into the adjacent unaffected tissues. Chapters 6, 7, 8 and 9 focus deal with the major mycotoxins produced by *Aspergillus*, *Penicillium* and *Alternaria* species in fruit and vegetables, with special attention to the molecular diversity of *Aspergillus* and *Penicillium* species.

Methods for detection of *Aspergillus*, *Penicillium* and *Alternaria* species are described in Chapter 10, and methods for detection and determination of ochratoxin A in grapes and wines, and of patulin and *Alternaria* mycotoxins in their relevant host fruit and vegetables are described in Chapter 11, 12 and 13, respectively.

Chapters 14, 15 and 16 focus on chemical, physical and biological methods for suppressing the growth of mycotoxigenic fungi, whereas Chapters 17 and 18 are dedicated to the direct control means for suppression and decontamination of mycotoxins in fruit and vegetables, and in their products.

The book is an in-depth treatise of mycotoxins in fruits and vegetables. The chapters are generally well written, very readable and very well documented with an extensive list of references. Putting it all together: the book is certainly recommended to all relevant operators in the food chain. The book could also be helpful to people involved in mycotoxin research in fruits and vegetables, because they

can get extensive information even on topics in which they are not directly involved. Students of food technology and processing can find good support here for their specific studies and research. And it will certainly be a welcome addition to the library of all those involved in the field of mycotoxins.