



## Book Reviews

**Mycotoxins and Phycotoxins 1988.** Edited S. Natori, K. Hashimoto & Y. Ueno. Bioactive Molecules 10, Elsevier, Amsterdam, 1989. ix + 484 pp. Price: US\$168.00.

**Fusarium, Mycotoxins, Taxonomy and Pathogenicity.** Edited J. Chelkowski. Topics in Secondary Metabolism 2, Elsevier, Amsterdam, 1989. xii + 492 pp. Price: US\$171.00.

Mycotoxin studies continue to make progress on an international front and Elsevier have a long tradition in publishing books dealing with this important aspect of food and feed mycology. In August 1988, the 7th International IUPAC Symposium on Mycotoxins and Phycotoxins was held in Tokyo and the first book reviewed is a collection of invited papers, just over half (31) of which deal with mycotoxins and the rest (26) with phycotoxins. This distribution of papers represents an increase in the proportion dealing with phycotoxins, reflecting an increased recognition of their importance, and it is interesting to note that regulatory aspects of food legislation are dealt with in both sections.

There are many exciting developments in the study of this complex array of secondary metabolites from filamentous fungi and algae (the latter including the prokaryotic cyanobacteria). It is good to see papers on mycotoxins from China providing a wider perspective to an already diverse subject. One such paper from the Institute of Nutrition and Food Hygiene, Beijing, reported the involvement of species of *Arthrinium* in the etiology of 'deteriorated sugarcane poisoning', this being the first time that this genus has been implicated in mycotoxicoses. Amongst the recent advances on the

chemistry of mycotoxins, reported by Steyn and Vlegaar, are the structures of the fumonisins, metabolites of *Fusarium moniliforme* considered to be implicated in the etiology of oesophageal cancer in parts of Southern Africa.

For a number of years the macrocyclic trichothecenes known as the baccharins (because they were isolated from Brazilian shrubs of the genus *Baccharis*) have provided a tantalising puzzle. Because of their very close similarity to the roridins, isolated from species of *Myrothecium*, I, for one, was convinced that they would prove to be mould metabolites. However, the report by Professor Bruce Jarvis and his colleagues of the University of Maryland seems to confirm that at least one species of *Baccharis* can synthesise macrocyclic trichothecenes *de novo*.

In September 1987, a symposium on *Fusarium—Mycotoxins, Taxonomy and Pathogenicity* was held in Warsaw and the contributors to that meeting have provided the 26 chapters for the book of that title. Although there have been several monographs on *Fusarium* much of the material of this book complements that already published. The first chapter is an updated version of a list of metabolites of *Fusarium* produced by Vesonder and Hesseltine in 1981 in the monograph *Fusarium: Diseases, Biology and Taxonomy* edited by Nelson, Toussoun and Cook. The requirement for an update is demonstrated by the increase in the number of pigments from 16 to 38 and in the number of trichothecenes from 17 to 48! Chapters vary from the very specific, such as those on fusarin C (Chapter 2) and on the taxonomy and nomenclature of *Microdochium nivale* (*Fusarium nivale*) (Chapter 11) to those on broader ecological themes. That mycotoxins from *Fusarium* are not restricted in their significance to man and terrestrial farm animals is demonstrated by a review of trichothecene poisoning of fish (Chapter 7). There is an interesting irony in the possibility of controlling one mycotoxin problem, namely the infection of cereals by ergot fungi, with hyperparasites of *Claviceps* from the genus *Fusarium* which may themselves produce trichothecenes (Chapter 22).

Both of these books have a wealth of interesting and useful information and provide valuable insights into the occurrence and significance of mycotoxins and, in the case of the first, phycotoxins.

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**Potato Science and Technology.** By G. Lisinska and W. Leszczynski. Elsevier Applied Science, London and New York, 1989. xii + 391 pp. ISBN 1-85166-307-X. Price: £58.00.

Books on the potato have been appearing with increasing frequency in the last 10 years and with some justification, since potato production has ceased