

The Shelf Life of Foods and Beverages. Proceedings of the Fourth International Flavour Conference, Rhodes, Greece, 23–26 July 1985. *Developments in Food Science 12.* Edited by George Charalambous. Elsevier Science Publishers, Amsterdam, 1986. xviii + 828 pp. ISBN 0-444-42611-6. Price: US\$170.50.

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The advertising information for the book circulated by the publishers best sums up the book contents: 'These conference proceedings comprise 55 chapters by 122 authors from 18 countries dealing with sensory, chemical, biochemical, microbiological, analytical, nutritional, safety and government policy aspects of the shelf life of foods and beverages. Conditions of storage are discussed, storage defects are noted and recommendations offered for their care and/or prevention. The information presented should be of considerable value to all researchers, analysts, nutritionists, manufacturers, packagers and administrators involved in the perennial effort to extend the shelf life of foods and beverages.'

It is difficult to say much more than this without a review lasting several pages to do each chapter the justice it deserves. The book is huge and a very wide range of subjects is covered in the 55 chapters as described above. They do not, however, appear to be presented in any particular sequence or under any particular sub-sectional headings, features which would have made the book more manageable.

Just as a wide range of subjects is covered, so a similarly wide range of commodities is described in the different chapters. Tea, whisky, popcorn, beer, wine, fruit, bread, vegetables and meat are included on the list in what appears to be almost random order. In a book of this size (over 800 pages) this random presentation of papers is not acceptable and a poor index of some five pages only does little to sort out the general confusion and is of little practical value. The only way to see what information is in the book is virtually to read it all, retrieval of information being otherwise very difficult. One hopes the conference was not as confusing. Having said this, there is undoubtedly a great deal of useful information present in the book. Presentation is by the process of camera-ready copy, presumably to save costs, and the process has worked with varying degrees of success with different chapters. Page 548 gives an extreme example of poor presentation, where a computer program is presented and is all but intelligible. Referencing at the end of each chapter is similarly variable: some chapters give references, some do not; some chapters use one style of referencing, some use a different style.

At \$170.50 (over £100.00) the book is not cheap and one would have

expected better value for money. It is a book that anyone working in this particular area would find useful, although in all honesty I cannot recommend that they go out and buy it.

M. W. Kearsley

Principles of Cereal Science and Technology. By R. Carl Hosenev. American Association of Cereal Chemists, Inc., St Paul, Minnesota, USA, 1986. 327 pp. ISBN 0-913250-43-0.

The book consists of 14 chapters covering many aspects of cereal structure, composition, processing and use.

The first chapter deals with the structures of individual cereals, with wheat being used as the main example and the cereal with which the others are compared. Since cereals have many common features, this comparison is not as unusual as might first appear. The main features of each cereal are presented, together with diagrams and photographs as appropriate. Unfortunately, the diagrams and photographs are often out of sequence with the corresponding text and this leads to some confusion when reading the book.

Chapters 2 and 3 describe the main components of cereals—starch and protein. Simple explanations of starch crystallinity, birefringence, structure, gelatinisation and retrogradation are given and a section on modified starches completes the chapter. Proteins are treated similarly, with structure, classification and properties being examined on a general basis and individual cereal proteins examined more closely. The minor components of cereals (as the author says ‘by quantity, not by importance’) are described in Chapter 4. The non-starch polysaccharides cellulose and hemi-cellulose, simple sugars and oligosaccharides, lipids and enzymes are discussed in some detail, although vitamins and minerals receive scant attention.

The next chapter deals with cereal storage, covering such topics as weight distribution problems in silos, through to more detailed accounts of the importance of water and drying in storage. Deterioration caused by microorganisms, mycotoxins, insects and rodents is briefly mentioned. Dry milling of wheat and wet milling of corn are described in Chapters 6 and 7, with modifications for other cereals where appropriate. The principles underlying the two main processes and subsidiary processes, such as treatment of extracted oil, are examined. A separate chapter is devoted to rice, oats and barley on the basis that these cereals are harvested with attached hulls.

The remaining six chapters are concerned with cereal commodities such as malted and brewed products, bread and biscuit products, pasta and noodles, breakfast cereals and snack foods.