

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.

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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.

All the chapters have the same basic structure—presentation of data and general information, review questions and suggested further reading. The book is aimed primarily at the student market but also contains much useful information for the seasoned cereal technologist, although the latter may find some parts over-simplified.

The book is very useful insofar as it explains many common phenomena very simply, a feature which more comprehensive texts sometimes lack! There are few mistakes in the book and the UK reader is not assaulted excessively by 'American English'. (Why do they call maize 'corn'?) I recommend the book to anyone with an interest in cereals.

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