Modern Cereal Science and Technology. By Y. Pomeranz. VCH, Reinheim, FRG, 1987. xi + 486 pp. ISBN 0-89573-326-9. Price: US$49·00.

As the author intended, this excellent book will be of use to students, researchers, novices and experts in the field of cereal science and technology. Unfortunately, the hardback book costs around 49 dollars which is perhaps a little too expensive for a standard text book aimed at the 'hard-up' undergraduate. This is a shame since the book is both comprehensive and very enjoyable to read.

In just 500 pages the author covers such topics as cereal production, the physical properties and structure of grain, the chemical composition of the major cereals, the classification and standards for grain demanded in the USA and other grain-producing countries, the storage of cereals, and the tests and definitions of quality currently being used by the industry.

Wheat milling is briefly discussed in a chapter which includes information about flour improvers. Flour components are described in more detail in the next chapter which leads on logically to the chapters on dough and bread structure, on bread making as both at art and a science, on breads from around the world (which I am sure readers from all aspects of the industry will find interesting on the sensory attributes of bread and bread staling and on the role of bread in human diet. Soft wheat products are considered in a separate chapter.

The author gives a brief description of the major cereals at the beginning of the book. Later, he devotes separate chapters to rice, corn and barley processing. Oats, sorghum, millets and rye processing are considered in a single chapter. The concluding chapters concentrate on extrusion products and the industrial uses of cereals.

This is a well indexed, comprehensive book which contains an abundance of useful references. It is clearly illustrated with both photographs and diagrams. I cannot think of a better book to include on the reading lists of anyone with an interest in cereals. It is an excellent source of facts about the cereal industry.

B. Brockway

Mycotoxins: Chemical, Biological and Environmental Aspects. By Vladimir Betina. Elsevier, Amsterdam/New York, 1989. 438 pp. ISBN 0-444-98885-8. Price: US$155·25/Dfl. 295·00.

The mould spoilage of food and animal feedstuffs has always been a major problem during the growth, harvesting and storage of these commodities.

Over the last few decades an aspect of mould spoilage which has become increasingly recognised is the ability of moulds to produce toxic metabolites known as mycotoxins. Dr Vladimir Betina, working in the Department of Environmental Chemistry and Technology of the Slovak Polytechnical University in Bratislava, has considerable experience of the study of these compounds and this experience, with a detailed knowledge of the now extensive literature on mycotoxins, has come to fruition in the production of a monograph on mycotoxins which forms Volume 9 in the series on Bioactive Molecules. The study of mycotoxins involves many disciplines, such as food science, mycology, biochemistry, chemistry, toxicology, agriculture and animal husbandry, as well as touching on such very human activities as economics and politics. Mycology, biochemistry and toxicology are reviewed by the author in the first six introductory chapters on the taxonomy of mycotoxin-producing fungi, mycotoxins as secondary metabolites, the biological effects of mycotoxins and the conditions under which they are produced.

The following eleven chapters deal with individual mycotoxins, or groups of related compounds, in a systematic manner and the final chapter deals with miscellaneous toxins which could not be fitted into any previous chapter. This represents a great deal of material in a very tightly condensed form, each chapter being completed with a considerable bibliography, and the book will serve as a useful reference work for several years to come. Indeed, if I have any reservation about the book it is that the author has been so enthusiastic about including direct reference to the large number of other workers in the field, that the actual results of their work may not be described and critically reviewed. Thus, the book is probably going to be most useful as a springboard into the primary and review literature as well as a source of detailed information about a large number of mycotoxins. There are a few errors, especially in the spelling of names of species of fungi, and the captions of Figs 4·4 and 4·5 do not seem to relate to the figures themselves. The captions refer to full and open arrows which the figures do not, in fact, seem to contain. This may seem a trivial complaint, but it reflects the frustration of coping with material which is so rich and diverse but has been compressed into such a condensed form.

Because the study of mycotoxins has yielded an enormous bibliography which is widely dispersed between many journals and symposium reports, Dr Betina has provided us with a useful compilation between just two covers which should find a space on the bookshelves of anyone involved in the production of safe foods and animal feeds.

M. O. Moss