

## Book Reviews

**Cheese: Chemistry, Physics and Microbiology. Volume 1. General Aspects.** Edited by P. F. Fox. Elsevier Applied Science Publishers, London, 1987. ISBN 1-85166-052-6. ix + 400 pp. Price: £55.00.

**Cheese: Chemistry, Physics and Microbiology. Volume 2. Major Cheese Groups.** Edited by P. F. Fox. Elsevier Applied Science Publishers, London, 1987. ISBN 1-85166-053-4. x + 393 pp. Price: £55.00.

Although published as two volumes an appreciation of the technical information in Volume 2 is clearly dependent on the basic material reviewed under the heading of 'General Aspects'. This breakdown of the subject into two components, i.e. 'scientific background' and 'commercial application', is, of course, entirely logical, because many of the topics covered in Volume 1 are relevant to most varieties of cheese. Nevertheless, the effect is to unbalance the book in favour of Volume 1, a shift that is enhanced by the fact that some of the contributions to the first part are truly outstanding.

Thus, after a useful introduction to the characteristics of rennets, three chapters are devoted to curd formation from coagulation through to the final loss of whey. What is impressive about these contributions is the clarity with which complex aspects of the subject are presented, and any serious student of cheesemaking will find this section invaluable. The coverage devoted to starter cultures is both extensive and detailed, and includes not only the expected discussion of current taxonomic studies, but also deals with the biochemical pathways present in the constituent bacteria, the reactions of many of the same bacteria to phage, as well as the genetic studies that have been carried out on the various groups. It is notable also that the

authors cite over 350 references, and hence further information can be found with comparative ease. Two further chapters of especial importance cover the role of salt in cheese manufacture and the rheology of the end-product, both topics that often receive rather marginal consideration.

There can be little doubt, therefore, that the quality of the reviews in Volume 1 makes it an exceptional addition to the literature of dairy science, and the Editor is to be congratulated on both the sub-divisions selected and his choice of authors.

The companion volume is something of a world guide to cheese varieties, in that many of the chapters deal with cheeses from a specific geographical region. The advantage of this approach is that data on local European cheeses, for example, are made available to a wider audience, and a notable contribution in this respect is the chapter on Iberian cheeses. In other cases, however, little may be known about a cheese other than a 'typical' chemical analysis, and the author(s) has clearly been at a loss for information. The book becomes, therefore, a useful source of very basic data about varieties of cheese, but except for occasional passages, the text lacks the penetrating and analytical tone of the previous volume. Perhaps the initial division of the subject matter made this contrast inevitable, but certainly the finished work is somewhat encyclopaedic in nature.

Taken together, however, these volumes do form a most comprehensive review of the available scientific knowledge of cheeses and their manufacture and, as such, they must be regarded as a major contribution to our understanding of the subject.

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