elucidated, and a number of vegetable components have been shown to exert cancer-protective effects.

The contributions are grouped into sections concerning legislation and regulatory control, carcinogens, mutagens and interaction products, and additives and contaminants, their technical content being very variable. Therefore, there is material of interest for both specialist and non-specialist, with a good selection of pithy statements which I am sure will be quoted by others, hopefully in context. Unfortunately pages 302–304 were missing from the review copy and I am dissapointed that the book did not appear much sooner after the conference, though this does not detract from the relevance of the majority of the papers.

**David Snodin**

**Review of Processed Meats,** 2nd edn. By A. M. Pearson and F. W. Tauber. AVI Publishing Co., Westport, CT, 1985. 427 pp. Price: US $55.00.

Although the authors claim that their updated and expanded version of the earlier edition is intended as a textbook for students entering the field of meat processing, it will continue to be a valuable reference source for anyone with interests in this increasingly important part of the meat industry. Wherever possible, it emphasises the scientific principles underlying the techniques and procedures involved in processing. In this respect, the authors go deep enough to give background without losing sight of the practical consequences. Readers wishing to go further are directed to the extensive and well-documented bibliographies at the end of each chapter. This approach allows fairly comprehensive coverage of the whole area of meat processing in a single volume.

Understandably, the text is directly related to the US meat industry but much of the detailed information can be applied to the industry of other countries. The first two chapters, 'Introduction to Meat Processing' and 'Composition and Nutritive Value of New Materials and Processed Meats', are particularly US-orientated with almost all the economic background and nutritional data derived from USDA and trade association handbooks. Even so, they give a good, general appreciation of the development of meat processing and its important role in any meat industry.

The following chapters, 'Curing', 'Smoking', 'Meat Cooking and

Cooked Meat Products' and 'Raw Materials', are clear, concise descriptions of basic processes and materials and their scientific background and are probably the most useful part of the book for students of meat science. Liberal use of sub-headings effectively breaks the text into easily located units of information. Of particular interest is the chapter on 'Smoking', a subject often neglected in such books. Non-US readers may experience some confusion with the units used throughout. Metrication is now so well established in the UK that mention of ounces, pounds, gallons (US) and degrees F will send many readers to consult their conversion tables.

Chapter 8, 'Least Cost Formulations and Pre-blending of Sausage'; Chapter 9, 'Sausages'; and Chapter 10, 'Sausage Formulations'; deal comprehensively with classification, formulation and manufacture of sausages of all types. Although primarily for the US reader, many of these products are European in origin and therefore of universal interest. Chapter 10, with detailed formulations of a great variety of sausages, could be of great value to the specialist meat processor.

Chapters 11, 'Casings, Seasonings, Extenders and Additives', and 12, 'Cured and Smoked Meats', continue to be mainly practical descriptions of ingredients and their use. That on cured meats is not quite as extensive as might have been expected with such a large volume type of product. Chapter 13 is a fairly brief introduction to canning technology, but the reference list should give readers ample opportunity to expand their knowledge.

Two new chapters, 'Sectioned and Formed Meat Products' (Chapter 7) and 'Restructured Meat Products' (Chapter 15) deal in a fairly general way with these important new areas in processing, outlining some of the specialised equipment and procedures employed. Analytical procedures for ingredients and products are covered in Chapter 16. Recommended (AOAC) methods are described in detail, along with mention of several other rapid methods commonly used by industry. In Chapter 17 a variety of lesser-used, but nevertheless interesting, methods of processing and preservation including hot processing, intermediate moisture meats, irradiation, freezing and treatment with enzymes are described. Some of these could have warranted more extensive coverage.

The last chapter deals with deterioration of processed meats, and is intended as a manufacturers' guide to the types of degradation that can occur. It is surprisingly brief and, for the sake of completeness, should perhaps have been covered in greater detail, particularly since the whole

area of packaging and storage of processed meats, with the exception of canning, has been omitted.

These omissions, however, should not be allowed to detract from what is an excellent textbook. The broad aims have been met very effectively and presented in such a way that it will surely be consulted widely by students, teachers and meat processors alike.

**A. A. Taylor**

**Surfactants in Cosmetics (Surfactant Science Series, Vol. 16).** Edited by Martin M. Reiger. Marcel Dekker Inc., New York, 1985. 504 pp. Price: US$106.50.

This book is divided into fourteen chapters, each written by an expert in the field. A mild criticism is that the field covered includes toiletries, as well as cosmetics, and possibly this should have been made clear in the title.

There are two very useful chapters (6 and 7) on the interaction of surfactants with epidermal tissues which is a summary of all the work published on this subject.

From a practical point of view on toiletries, there is a chapter each on shampoos, oral hygiene products and aerosols. Cosmetics is covered by a chapter each on emulsions, micro-emulsions, skin cleansers and surfactants in cosmetic suspensions.

Finally, the deliberate omission of formulae from the above chapters and the greater depth of coverage of the principles involved is most welcome.

**T. J. Elliott**