Legumes: Chemistry, Technology, and Human Nutrition. Edited by Ruth H. Matthews. A Monograph in Food Science and Technology Series No. 32, Marcel Dekker, New York, 1989. 408 pp. ISBN 0-8247-8042-6. Price: US$99·75 (US and Canada) US$119·50 (elsewhere).

This book contains 10 chapters, each written by an authority on the subject. The contents are: (1) 'Culture and genetics of grain legumes', Edgar E. Hartwig (USA); (2) 'Harvesting and storage of legumes', S. S. Kadam (India) *et al.*; (3) 'Refined oils', Clyde E. Stauffer (USA); (4) 'Isolated soy proteins', D. H. Waggle (USA) *et al.*; (5) 'Legume protein flour and concentrates', Joseph G. E. Endres (USA); (6) 'Fermented products', Clifford W. Hesseltine (USA); (7) 'Nutrient composition of raw, cooked, canned, and sprouted legumes', Jorg Augustin (USA); (8) 'Nutrient content of other legume products', David B. Haytowitz (USA); (9) 'Animal feed uses of legumes', Park W. Waldroup (USA); and (10) 'Antinutritional factors', Irvin E. Liener (USA).

The aim of the book is to provide accurate, comprehensive information on the production, technology, processing and properties of legumes and legume products and in this it achieves its aim, often in considerable detail. The chapter on fermented products is particularly useful in its details and coverage. The main area where the content matter falls down is in the field of human nutrition.

Although legumes have been traditionally known to provide rich sources of protein (and some vitamins and minerals) in the human diet, there is much current interest in their beneficial physiological effects, which have been largely ascribed to the high dietary fibre content. In this context the book did not live up to expectations. Indeed, the index includes only an entry for crude and not dietary fibre. Considering that legumes are advocated in diabetic diets on account of their low glycaemic index and high fibre content, and in diets for hyperlipidaemics due to their cholesterol-lowering effects, it seems surprising that these aspects were either ignored or given cursory examination.

The only section concerned specifically with human nutrition is that in the chapter on 'Isolated soy proteins', which deals, in 11 pages, with the nutritional value of isolated soy proteins for infants, children and adults. Either the editor should have taken 'human nutrition' out of the title, or replaced the very long chapter (over 90 pages) devoted to 'Animal feed uses of legumes' with one dealing with aspects of human nutrition.

The book is nicely presented, printed and referenced, although the index could have been made more useful by being more fully integrated. As it is, it too closely follows the format of the contents pages. For example,

'hypolipidemic' appears under 'isolated soy proteins', not as a subject in its own right and there are many more examples I could quote.

Despite these reservations, this will be a useful book, particularly for those involved in food manufacture using legumes or legume products. It is a specialist's book, with a lot of useful details, so those who will also find it useful will be nutritionists and others interested in legume composition, such as food technologists, food scientists and chemists, agronomists and animal scientists.

Ann F. Walker

Mechanisms of Action of Food Preservation Procedures. Edited by G. W. Gould. Elsevier Applied Science Publishers, London, 1989. xii + 441 pp. ISBN 1-85166-293-6. Price: £59·00.

Although many of the most commonly used food preservation procedures have a long history of successful use, their effective application has been largely empirically derived and their fundamental modes of action are not well understood. This absence of a firm scientific understanding constrains new developments and one of the aims of this book is to bring together current knowledge of the modes of action of preservation methods with the hope of encouraging the development of new and improved procedures.

The preservation procedures covered include heat, ionising radiation, low temperature, low water activity, low pH, organic acids and esters, sulphite, nitrite, modified atmospheres and natural biological antimicrobial systems. In addition, the roles of compartmentalisation in water/oil emulsions and of combination and synergistic effects are reviewed.

The book succeeds admirably in its aims and the editor and contributors are to be congratulated on avoiding the unevenness of quality and style that so often bedevils compilations of this type. I commend it both to researchers and product developers in the food industry and to educators and students of food science and technology. Unfortunately, the price is out of the range of most private purchasers, but put it on your library purchase list.

J. D. Owens