

Book reviews

Food and Nutrition Encyclopedia. A. H. Ensminger, M. E. Ensminger, J. E. Konlande and J. R. K. Robson, CRC Press Inc., Boca Raton, USA, 1994. 2415 pp. Price £250.00. ISBN 0-8493 8980-1 (two volume set).

Food, nutrition and health and the interdependence of the three is a subject which affects us all. The main causes of death have changed over recent years and are now no longer due to infectious diseases such as tuberculosis but to chronic diseases of middle and old age such as heart disease, stroke or cancer. We can reduce the risk of dying from such diseases by controlling our exposure to and intake of factors known to stimulate such diseases or increase our intake of foods known to have an inhibitory influence. In America, cholesterol intake has decreased but there appears to have been little effort to limit the intake of sugar and salt or to obtain sufficient vitamins or limit weight, and as such, dietary factors are associated with five out of the 10 leading causes of death.

For us to understand the relationship between food, nutrition, and health, we need to know the basics of chemistry, biochemistry, physics, microbiology, physiology, medicine, genetics, mathematics, endocrinology, behaviour, cellular biology, and genetic engineering and therefore we need to have reference books which bring together elements from all the disciplines. *Foods and Nutrition Encyclopedia* is such a book. This is a vast work with the revised second edition containing more than 2400 pages with over 2800 individual entries and 1690 figures and pictures. The topics are taken from many fields, including medicine, dentistry, nursing, dietetics, nutritional science, public health, food production and processing, and are all arranged in alphabetical order with cross referencing to related articles. Compositional analysis of many foods, including protein, fat, carbohydrate and dietary fibre content are included.

This is an indispensable reference work for all those involved in the areas of health and nutrition, including food scientists, technologists, and nutritionists, and for scientists looking at the influence of individual food components, such as proteins, fats and carbohydrates, on health. It is also a useful reference book for those individuals wishing to identify the recommended daily allowance of food components and to identify those foods which will assist in the individual achieving a balanced diet.

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Biotechnology and the Food Industry. P. L. Rogers and G. H. Fleet (eds) Gordon and Breach Science Publishers, 1993. xvi + 298 pp. £18.00. ISBN 2-88124-354-1.

The new biotechnology with its emphasis on recombinant DNA technology and mass culture of microbial, plant, and animal cells, has a profound impact on the food industry, offering many opportunities in improvement of raw material and/or ingredient quality, consistency, and availability, new product development, cost reductions, novel processing methods, improvement of the nutritional value of food and upgrading of waste streams to value-added products. It is essential that food industry scientists and corporate managers monitor emerging technologies to assess those areas which could provide a competitive advantage in the market-place, and poised to meet the demands of the consumer.

Biotechnology and the Food Industry, which contains revised and updated contributions from the Symposium held at the University of New South Wales, Sydney, aims to provide the underlying principles of the new technologies and to explore their application in the commercial setting. The book explores the pressures and competitive forces in the market-place due to the changing profile of the food consumer and food industry, and discusses how biotechnology can be used to meet the demands of the consumer-driven market-place. Techniques of genetic engineering of bacteria and yeasts and recombinant DNA technology as well as principles and practice of enzyme technology and the tailoring of new enzymes to meet specific industry requirements are also discussed. *Biotechnology and the Food Industry* also addresses rapid methods of analysis based on immunodiagnosis and DNA probe techniques, the potential of plant tissue culture for the production of colourings, flavours, pigments and fine chemicals, together with new developments in bioprocess engineering and waste treatment. The last chapter of the book provides an overview of the current principles of food legislation and then addresses some of the potential risks and directions for the regulation of foods produced by new biotechnologies.

Biotechnology and the Food Industry will be useful to biotechnologists, food scientists and technologists, engineers, industrial microbiologists, undergraduate and postgraduate students in these areas as well as practitioners in the food industry.

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