

Book Review

Palm oil. Vol. 15 in the Critical Reports on Applied Chemistry Series. Edited by F. D. Gunstone. Published for the Society of Chemical Industry by John Wiley & Sons, Chichester. 1987. ix + 100 pp. Price: £29.00. ISBN 0-471-91335-9.

Palm oil has developed dramatically in importance since 1970 with a 325 per cent increase in production in the 15 year period up to 1984, and this has resulted in the oil having a higher production figure than any other vegetable oil except soyabean oil. This text provides a detailed and wide ranging introduction to the subject.

The first chapter describes the past and prospective world production and exports of palm oil. The growth of the palm oil industry is analysed and future prospects are discussed. This provides a useful historical insight into the development of palm oil production. It is inevitable that this type of chapter does not include the most recent figures, which can readily be obtained from review articles. However, data up to July, 1985 are presented and the author attempts to overcome the problem of the chapter rapidly becoming out of date by including anticipated figures for production up to 1990.

Following chapters cover the growth and production of oil palm fruits, extraction of crude palm oil, refining and fractionation of palm oil, and end uses of palm oil including human food, animal feed, and industrial uses. The chapters are written by different authors but they seem to be consistent in aiming at a detailed introductory level. Most relevant aspects of the subject are covered at least superficially, but it is regrettable that solvent fractionation and polymorphism of palm oil are not covered in greater

detail. Several of the authors are based in Malaysia, which reflects the importance of that country in palm oil production. The authors' enthusiasm for the use of palm oil in food products shows up clearly in Dr Kheiri's chapter on uses in human food, where some of the limitations in the use of palm oil for certain foods are underestimated. The references provided in most chapters are useful, but no references are included in the sections dealing with production or industrial uses of the oil.

The book appears to be factually accurate and there appear to be few errors. However, the sterol content in Table 4.5 adds up to 109%. One unusual convention, which can be rather misleading, is the use of \pm as representing approximately. Although some topics are covered rather superficially, this text provides a useful introduction to all aspects relevant to palm oil production and utilisation, and it can be highly recommended for the non-specialist.

M. H. Gordon

Food Factories: Processes, Equipment, Costs. Edited by Alfred Bartholomai. xvi + 281 pp. VCH Publishers Verlagsgesellschaft, Weinheim, NY, Basel. 1987. DM220. ISBN 3-527-26490-6 (VCH Verlagsgesellschaft), ISBN 0-89573-554-7 (VCH Publishers).

The manual consists of 41 chapters (each prepared by a specialist with extensive experience) on the engineering and operation of plant producing different processed foods. Examples of products from all areas of the food processing industry are included, and the scale of plants described ranges from a US\$116 000 mushroom plant to a \$30 million corn starch plant.

Each chapter follows a uniform format designed to simplify the presentation of the data. For each factory information is presented on the product and its market as well as the process description, plant layout and output. The requirements of the plant in terms of labour (numbers and skill level), raw materials, equipment and utilities are described. Detailed analyses of the cost of plant and equipment including all design, engineering and freight costs are presented. Operating costs are itemized and expressed both as total cost per annum and cost per unit of product.

The introduction states that the role of the manual is to assist in investment decision and to help in economic evaluation of an investment in a food processing business. The major drawback is how useful the information on cost can be to a specific situation. While the figures for cost of items of plant are likely to be accurate, costs of raw materials, energy, labour and utilities are standardized to single rates which can only be arbitrary and could lead to vast discrepancies in operational costs in some