

Book reviews

B. Mattsson, U. Sonesson, (Eds.), *Environmentally-Friendly Food Processing*, Woodhead Publishing Ltd, Cambridge, UK, 2003 (xiv + 337 pp., £115.00, ISBN 1-85573-677-2).

The environmental impacts of food production processes can occur in different places and at different times. For example, large losses of raw material in a variety of food production processes leads to large amounts of emissions (both agricultural and industrial). In recent years, the food industry has had to respond to the increasing environmental awareness of both consumers and regulators (the latter often responding to pressure from the former). This volume provides food manufacturers with a better understanding of how to achieve environmentally friendly food production. This is achieved through discussion and assessment of different food products and the practices that can help the food industry to be more environmentally responsible.

A structured and systematic, up-to-date account of the assessment of various food production processes and practical measurements to assist with improving environmental performance is provided in *Environmentally-Friendly Food Processing*, which is divided into two main parts. There are five chapters in the first part, which discusses the life cycle assessment (LCA) of food processing operations in the fruit, vegetable, animal and seafood production industries. LCA is an assessment of the environmental impact of a product from the raw materials to the point of consumption. The eleven chapters that make up the second part of the volume concentrate on good practice in food processing. Energy and waste management are extremely important issues relating to food production and processing. Specific chapters in the second part focus on packaging, recycling and waste treatment, providing training and ways of improving energy efficiency in the food industry.

Environmentally-friendly food processing is a useful reference volume for all food industry professionals, since it provides the reader with a solid grounding in environmental awareness in relation to the food industry, which itself is a major user of carbohydrate polymers.

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M. Lees (Ed.), *Food Authenticity and Traceability*, Woodhead Publishing Ltd, Cambridge, UK, 2003 (xvii + 612 pp., £150.50, ISBN 1-85573-526-1).

Food as a collection of items invariably involves carbohydrate polymers—giving energy, structure, flow, gelation, viscosity, and bulk. Food traceability has recently become a major concern for the food industry and consumers, particularly since the emergence of food-related diseases such as BSE and avian fever. Another new consumer concern is the traceability of genetically modified (GM) food or food components, which have yet to be proved to be harmless or harmful. Yet another area of concern with the influx of a range of useful carbohydrate polymers is the adulteration of such by other carbohydrate polymers which have not been approved or are impure and therefore represent a contamination. Such increasing concerns have led to significant improvements in food traceability technologies during the last decade, which now involve the use of very specific techniques, such as spectrophotometry, chromatography and PCR.

Food Authenticity and Traceability is a collection of detailed reviews covering the application of current and new technologies with respect to food traceability and authentication. The volume is divided into three sections; the first 13 chapters focusing on current technologies, e.g. PCR, enzyme immunoassays, NMR spectroscopy, GC and HPLC. PCR is now applied to food traceability by identifying specific DNA fragments in food products or materials. This has a range of applications, such as fraud detection or certification of products. For example, the