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Handbook of Waste Management and Co-Product Recovery in Food Processing, vol. 1, K. Waldron (Ed.). Woodhead Publishing Ltd., Cambridge, UK (2007). xx + 662 pp., £150-00, ISBN: 1-84569-025-0

The intensification of agriculture and food production in recent years has led to an increase in the production of food co-products and wastes. In Europe alone, over 220 million tonnes of food related waste are disposed of annually. As a consequence of increased environmental awareness, the food industry is facing mounting pressures to reduce food processing and related wastes. Methods to reduce waste production, valorise unused co-products and improve the management of unavoidable wastes are becoming increasingly important to the food industry. Coincidentally, there is an increasing body of scientific literature relevant to exploiting food-processing co-products. *Handbook of waste management and co-product recovery in food processing* tries to show how to reduce energy and water loss, and methods that may be used to valorise co-products.

The first part provides an introduction to the subject with special reference to the principal drivers. The second part focuses on the minimization of waste, both in terms of biowaste and efficient energy management, and the importance of chain management and good housekeeping practices. This management is very important in reducing instances of irregular waste production that arise from managerial and technical problems (Chapter 3). It presents exploration of the potential for minimization of energy use in food processing, highlighting the energy-intensive nature of the industry. In addition, it evaluates opportunities to minimize water use and wastage (Chapters 4 and 5).

Expert opinion on research and technology associated with stabilization, fractionation, extraction and filtration of waste streams is provided (a broad section in the third part). Moreover, importance of implementation of HACCP systems to each of these processes is underlined. It gives examples of novel separation techniques (e.g. supercritical CO₂) and membrane filtration technologies concerning recovery of valuable products and water recycling. Descriptions of waste management of the main food-processing sectors such as meat-, fish-, plant-derived co-products with aspects of legislation gives a general overview of the problem. Phytochemicals of intracellular origin are claimed to have big potential in functional foods and pharmaceuticals (Chapters 17–20). One of the crucial problems to solve is minimizing disposal of food-processing wastes. BOD, COD

and other factors indicating amount of wastes are considered when treatment of wastewaters is being presented.

This is a useful book with wide ranging information and does well in provoking careful thought as to how to use and how to minimise waste in the food-processing chain.

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A. Subic (Ed.), Materials in Sports Equipment, vol. 2 Woodhead Publishing Ltd., Cambridge, UK (2007). xxiv + 347 pp., £135-00, ISBN: 1-84569-131-8

Improvements in material strength, weight and flexibility have had a profound effect on the equipment used in many areas of sporting activity. The first volume of *Materials in Sport Equipments* has become an essential reference work describing improvements in materials technology and their impact on equipment in a range sports. This second volume combines coverage of recent developments in advanced materials and their application in a number of sports not covered in volume 1. Building on the success of the first volume, this important book reviews design and materials in a range of sports, and in particular describes the interrelationships between the design intents and materials used in sports equipment development.

In present-day times, more people than previously are participating in sports. With increased interest and participation in sports, and the extensive media coverage of sporting events worldwide, sport has evolved into a global business worth around US\$ 600 billion in total. The world sporting goods market is estimated at US\$ 120 billion retail, with footwear accounting for US\$ 30 billion, apparel US\$ 50 billion and equipment US\$ 40 billion. The sporting goods industry has diversified over the years to accommodate the different interests and needs of the athletes and also of consumers in general. The industry has also promoted and helped to develop new sports that have in turn served as catalysts for new types of products.

Part I of this volume discusses general issues such as modeling of materials behaviour in sports equipment, materials and design for sports apparel and mouth and skull protection, non-destructive testing methods of sports equipment: such as the use of infrared thermography. Part II analyses the materials and design of equipment used for specific sports: baseball, snowboarding, ice hockey, fly fishing, archery and rowing. The book also covers design and materials in athletic and fitness equipment.