

Book reviews

Agri-food quality II: Quality management of fruits and vegetables – from field to table

Edited by M Hägg, R Ahvenainen, AM Evers and K Tiilikkala

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This book draws together the papers presented at an international conference 'Agri-Food Quality II: Quality Management of Fruits and Vegetables – from Field to Table' held in Turku, Finland in April 1998. In common with many conference proceedings, it covers a mixture of topics in a variety of styles. Nevertheless, in its 376 pages, there is a wealth of interesting material.

The scene is set by five papers that consider a theme entitled 'Quality challenges in the future.' In a philosophical paper, WMF Jongen clearly identifies a need to change the traditional unidirectional approach to quality. This traditional thinking starts with the raw material which dictates subsequent processing and presents the end product to the consumer in a 'take it or leave it' frame of mind. Jorgen successfully argues that the consumer must be the focus because he/she defines quality in all its aspects. Moreover, if consumers do not buy a product, the industry producing that material will fall. Jorgen then develops this idea by considering various aspects of the chain from field to table. In contrast, the remaining papers in this section deal with largely unrelated and specific topics: genetic enhancement of plant-derived foods, natural antioxidants, the Slovak Food Data Bank and the economics of vegetable production.

The second section is more coherent and presents views on consumer attitudes to improving food quality and discusses ways in which these may be studied. This section is followed by papers on sustainable production. The characteristics of 'organic' crop products are discussed and specific constraints in cultivation of root vegetables and brassicas are explained. Within this section there are interesting discussions relevant to sustainability.

At the outset of the book it is made clear that ultimate product quality depends on more than the raw material. Post-harvest practice is reviewed in a series of general and specific presentations. Control of enzyme activity and cell separation, modelling of biochemical change in potatoes during storage and specific methods for improving the quality of apples, strawberries, lettuce, apricots, green peas, onions, beans, squash, tomatoes and carrots are considered.

Somewhat surprisingly, the next short section deals with pre-harvest quality and is once again a pot-pourri of short papers of a specific nature.

Quality assessment is considered in the penultimate part of this book. The scene is set by introductions to and comments on techniques for assessing many aspects of the quality of fruit and vegetables. The techniques range from comparatively simple measurements of texture to sophisticated chemical analyses, and the characteristics considered span the association of physical measurement with perception of texture to extraction and characterisation of highly coloured natural pigments.

The final section of the book focuses on functional foods, ie food containing compounds that have positive cellular or physiological effects in the body. There are some interesting and extreme claims within this section. For example, the clusterbean (*Cyamopsis tetragonoloba* (L) Taub) is reputed to cure night blindness and act both as a laxative and as a chemotherapeutic agent against smallpox. In contrast, more conventional papers deal with potatoes with increased carotenoid content and the variation in vitamin C in the breeding of sea-buckthorn.

This book is neither a student textbook nor a systematic review of the quality of fruit and vegetables. There are many interesting papers but they are short and provide, in many cases, only a brief and limited introduction to the topic. In addition, the editors missed the opportunity to arrange the contributions in a more logical manner. For example, it would be natural to follow pre-harvest matters with post-harvest phenomena. As a result, the appeal of this book will be limited to research workers active in the area of measurement and control of the quality of fruit and vegetables.

DD Muir

Understanding humic substances: advanced methods, properties and applications

Edited by G Davies and EA Ghabbour

Royal Society of Chemistry, Cambridge, 1999

pp 286, price £59.50

ISBN 0-85404-799-9

This is the companion volume to *Humic Substances: Structure, Properties and Uses* from the same editors and publisher. Both are proceedings of Humic Substances (HS) Seminars held at Northeastern University, Boston, Massachusetts. They present the latest research for specialists, but non-chemists may find the technical content a little intimidating in its complexity. Those who have worked with HS over many years tend to treat them with awe. In his introduction, Morris Schnitzer compares the vagaries of the characteristics of HS to those of God. In an overview paper,