British Journal of Nutrition (2009), **101**, 1110–1111

Book Review

(First published online 16 February 2009)

Thomas S. C. Li. *Vegetables and Fruits: Nutritional and Therapeutic Values*. Boca Raton, FL: CRC Press. 2008. £67.99 (hardcover), pp. 304. ISBN 978 1 4200 3871 9

This book aims to provide researchers, manufacturers and producers with nutritional and therapeutic information about vegetables and fruits with particular reference to the North American market. The short (seven pages) introductory chapter is followed by a series of six chapters, each of which consists of a table. These tabulate 'Nutritional and Therapeutic Values of Vegetables', 'Vitamins and Minerals of Vegetables', 'Flavonoid, Isoflavone, and Carotenoid Contents in Raw Vegetables', 'Nutritional and Therapeutic Values of Fruit', 'Vitamins and Minerals of Fruit' and 'Vegetables and Fruits Used to Protect Health'. There follow five appendices: 'Chemical Components and Their Sources', and four lists of 'English and Scientific Names': two for vegetables and two for fruits, with each list starting either with the English or the scientific name, like a foreign language dictionary.

According to the publisher's blurb the book employs a 'no-nonsense, tabular format'. Sadly *nonsense* is the word that comes to mind when the contents are examined. This is the most pointless scientific book I have ever seen. It is simply a compilation of observations and reports without any structure or critical input from the author; the impression gained is that the author has simply piled up indiscriminately whatever findings he has chanced across, without any evaluation as to their utility or relation to previous or subsequent work. It is a book lacking authority and scholarship. This means that the information provided is of no use to any of the intended readership, who would be more effectively informed by any of the many other books or innumerable internet sites that cover this field.

The introductory chapter sets the style for the rest of the book: every paragraph provides an example of sloppy writing in desperate need of an editorial red pen; there is no distinction between what has been observed in a study, what has been concluded from the observations, and what the wider implications may be. There is a total lack of structure so that facts and conclusions are presented in paragraphs that seem to have undergone a randomization process. The chapter contains a summary of the nutritional importance of proteins, fat, sugar, minerals and vitamins A, B_1, B_2, C, D and E. Let us ignore the assumption that any reader of this book will have more than a passing knowledge of the role of these nutrients, and sample the fatuousness of the entries. The entry for sugar is short: 'Vegetable sugar is mainly glucose and sucrose. The contents vary from 1·6 (water dropwort) to 56·6 g/100 g (lotus) (Chapter 2). This natural source of sugar is an important component of the human diet'. The entry for protein recommends as an abundant source of protein the 'glutenin in wheat, pulses, beans, and peas'. The entry for fat states that 'the amount [of fat or oil] is not significant [in vegetables and fruit] except in certain groundnuts, such as peanuts, soybeans, and the seeds of the sunflower, pumpkin, watermelon, and sesame'. The entry for vitamin B_2 inexplicably decides to talk about folic acid halfway through. The entry for vitamin A implies that provitamin A carotenes account for the green colour in spinach, broccoli, lettuce, green bean, peas and cabbage (and chlorophyll?). There follows a paragraph on antioxidants which includes the statement: 'It may not be well-known, however, that phytocompounds are present in vegetables'. A few random examples are then given to convince the reader that yes, indeed, vegetables do contain quercetin etc. The introductory chapter also includes a list of ORAC (oxygen radical absorbance capacity) values (in μg [of what?] per 100 g) of some vegetables, from what is described as a 'recent' US Department of Agriculture website (1999 is hardly recent in 2008). There is no comment as to the significance of these values, no explanation, just the values.

When we turn to the tables that constitute the bulk of this book we enter a new dimension of worthlessness. The table of 'Nutritional and Therapeutic Values' consists of statements of the type: 'Adzuki bean is used to treat liver detoxification [*sic*], jaundice, edema, and diarrhea. It contains fiber, folic acid, vitamins B1, B2, B3, and B6, zinc, potassium, phosphorus…'. The comments carry no critique of effectiveness as a treatment, no evaluation as a source of minerals or vitamins; the table is just an indiscriminate list of findings selected from the literature, seemingly at random. Many statements refer to such 'authorities' as www.healingfoodreference.com, but too many lack any reference. The table of 'Vegetables and Fruits Used to Protect Health' is not referenced at all. So, for example, with the entry for *Energy* (presumably lack of) as one of the *Health Concerns*, the *Special Crops* are given simply as *Lavender and Taiwan anoectochilus*, and the reader is left high and dry as to how this snippet of knowledge might be applied. The variety of *Health Concerns* is wide: *Chill feeling* is followed by *Cholesterol* (presumably too high); another page lists in order *Pain*, *Parasites*, *Phlegm*, *Skin*, *Sleep (insomnia)*, *Stomach* and *Thirst*. *Body weight* does not specify whether the *Health Concern* is to reduce or increase, but *Cancer* is followed reassuringly by *(prevention)*.

It is difficult to know what purpose can be served by the table listing 'Chemical Components and Their Sources' which again is not referenced and is packed with idiocies. The herbs and crops listed as *Sources* for *calcium*, *carbohydrates*, *chloride*, *chlorine*, *methanol*, *phosphorus*, *starch*, *sucrose* and *sulphur dioxide* are unlikely to be useful sources; and one suspects that editing has not been particularly thorough when we find *crystalline*, *stereoisomer*, *thamin* (?),

trisulfide, *uglic acid* (?) and *thatglycosides* [*sic*] all listed as *Components* for which *Sources* are provided. The *Source* for *curcumin* idiosyncratically ignores *Curcuma longa* and gives *Brassica oleracea* var. *botrytis*. And if you are looking for a *Source* of *cellulose* you are advised to seek out *Malva verticillata* var. *crispa* and *Zea mays*, while for *gluten* the *Source* advised is *Taraxacum officinale*. *Citrate* is obtainable only from *Allium cepa*, but *citric acid* has a wider range of sources. *Ascorbic acid*, *ascorbate* and *vitamin C* are listed separately, though mysteriously the reader is advised that only *Apium graveolans* is a source of *ascorbate*, while *Asparagus officinalis* and *Beta vulgaris* belong to a longer list of *Sources* for *ascorbic acid*, and *Asparagus officinalis*, but not *Beta vulgaris*, will furnish *vitamin C*. Enough said. These tables *are* nonsense. Do not buy this book.

Philip John

School of Biological Sciences
University of Reading
UK
Email: p.john@reading.ac.uk
doi:10.1017/S0007114509220861