

Book Reviews

Beer: Health and Nutrition

By C.W. Bamforth

Publication: 2004
Publisher: Blackwell Publishing
Hardcover, 6.75 × 9.75 in., 184 p.
Price: \$139.99 US or £69.50 (Amazon.com)
ISBN: 0 632 06446 3

The author of this book, Charles W. Bamforth is the Professor and Head of Malting and Brewing Sciences, Department of Food Science and Technology, University of California, Davis, USA. He has written a very timely and interesting book on beer with a view to health and nutrition. It fills a large void in the brewing literature and is a welcome addition. It is well balanced and covers both the positive and negative factors of beer, health and nutrition. It is an extremely readable book sprinkled with historical quotes and personal comments and insights. The book contains many useful tables and figures. For example there are tables comparing the vitamins in beer in relation to other foods and a four page table covering the calorific value of a range of beers. Since numerous diet books such as Agatston's "The South Beach Diet" have erroneously labelled beer as being high in maltose it is good to see the myths regarding beer and carbohydrates corrected. The index to the book is listed below. The book is highly recommended to those working in the brewing industry and to those who are interested in the health and nutrition aspects of beer.

Chapter One: Beer as Part of the Diet. Beer: a vice or a staple part of the diet? Getting beer into perspective. What is moderation? But what about addiction? Impacts on behavior.

Chapter Two: Beer through history. Brewing travels west. Restraining excess. Religious origins. Maintaining standards. Beer: a nutritious dish for the whole family. Temperance pressures. Towards prohibition.

Chapter Three: The basics of malting and brewing in relation to product safety and wholesomeness. Chemical beer? Basic outlines of malting and brewing. Styles of beer. The chemistry of beer.

Chapter Four: The basics of human nutrition. Energy. Phytonutrients. Carbohydrates, fat and protein. Vitamins. Minerals. Fibre. Water. Balance

Chapter Five: The composition of beer in relation to nutrition and health. Energy. Carbohydrate, fat and protein. Water. Vitamins. Minerals. Fibre. Comparison of beer with other foodstuffs for nutrient value. Potentially deleterious components of beer. Beer as a "treat".

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Chapter Six: The impact of alcohol on health. The metabolism of ethanol. Direct and indirect impacts. The heart and circulatory system. The liver and the digestive system. The reproductive system. Brain and cognitive function. Kidney and urinary tract. Age. Cancer. Allergy. The common cold.

Chapter Seven: Conclusion and References. Over 500 references listed

Reviewed by Inge Russell
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Wine Flavour Chemistry

R. J. Clarke and J. Bakker

Publication: September 30, 2004
Publisher: Blackwell Publishing
Hardcover, 9.8 × 7.0 × 0.8 in., 324 p.
Price: \$164.99 US or £85.00 (Amazon.com)
ISBN: 1405105305

The first impression of this review regarding this volume considering "Wine Flavour Chemistry" is that it is readable! It is not just focussed at the technical intelligencia but also to anyone with an interest in alcoholic beverages. Sentences in the preface indicate to the reader the overall direction of this text: "...the technological advances in viticulture and wine making have been based upon the scientific exploration of grapes and wines, their constituents and their chemistry, by scientists in many disciplines world-wide. Advances in analytical laboratory institutions have proven to be a great help".

The book is written in seven chapters plus a very informative appendix.

Chapter 1 as you would expect is an introduction and comprehensively discusses wine production with an interesting historical section at the beginning. The section on vinification (Section 1.5) is extensive and as well as covering red and white wines the section on specialised wines (for example sweet wines and champagne) and the section on fortified wines (port, sherry and Madeira) are particularly informative. The final section in this chapter (1.5) is an unusual one in a book on the technical aspects of alcoholic beverages because it considers the physiological effects of wine and discusses subjects such as intake of alcohol and also the beneficial effects of alcohol such as anti-cancer properties and positive effects on heart disease. The concluding paragraphs of this section deal with allergic reactions, migraine and the toxic effects of methanol which can cause blindness and death.

Chapter 2 discusses "Grape Varieties and Growing Regions" Grapes are discussed in considerable detail together with the soil and the climate in which they are grown. There are two very informative tables (2.5 and 2.6) which summarise the grape varieties and their characteris-

tics for the production of red and white wines respectively. There is a concluding section discussing finished wine quality and it reviews the quality of French, German, Italian and Spanish wines together with reference to wines from other parts of the European Union. If there is one major criticism of this book it is that reference to new world wines is minimal!

Chapter 3 discusses “Basic Taste and Stimulant Components”. It discusses the stimulant effects of ethanol together with other wine components such as sugar, acidity, organic acids, etc. The structure of many of these components is given in a number of instances, for example Table 3.4 lists the main acids found in wine and Table 3.5 the major sugars found in musts and wines. In addition, the basic chemistry of “minor” constituents such as flavanoids and anthocyanins is given and the structures are clearly drawn. In addition under the “other constituents” section, the effects of components such as sulphur dioxide, carbon dioxide and oxygen are discussed. Perhaps one of the most interesting sections of the whole volume is the one on “changes in maturation” (3.8). Of particular interest to someone such as this reviewer interested in the maturation of Scotch Whisky, is the section on “‘In-barrel’ ageing” and the influence of oak.

Chapter 4 discusses “volatile components” in considerable detail. The influence of volatility on flavour is well discussed. Of particular interest to anyone interested in the odour of alcoholic beverages is Figure 4.2 which documents the relationship between partition co-efficients and odour threshold. There is considerable discussion (Section 4.2) on the volatile components detected in wines. Again this would be of interest to anyone interested in alcoholic beverages generally because many of the components are common to most of the alcoholic beverages particularly the esters, aldehydes, ketones and higher alcohols. The bibliography section of all chapters is extensive but this is particularly the case for this chapter where reference is made to volatile components in wine, other alcoholic beverages and non-alcoholic beverages such as coffee, fruit juices and even soya bean oil.

Chapter 5 discusses “Wine-Tasting Procedures and Overall Wine Flavour”. The procedures for wine-tasting (Section 5.2) are discussed in considerable detail. Indeed the syntax of this section rather onerous. It may have been better if it had been broken up with a few simple diagrams or tables. The same is true of the next section (5.3) which discusses factors influencing sensory perception although Table 5.1 simply but appropriately classifies odour sensations such as floral, fruity, spicy, etc. and Table 5.2 gives greater detail on these flavour types. Also in terms of flavour types Figure 5.4 discusses the contribution of specific grape varieties to wine odour characteristics.

Chapter 6 discusses sherry and port and makes the important point that fortified wines such as sherry, port and Madeira are very different in their sensory properties. The differences between these three types of alcoholic beverages are clearly discussed. The types of grapes employed are listed and again, for someone interested in alcoholic beverages in general, the volatile components in Fino

sherry are listed (Table 6.1) in considerable detail. Again the effects of maturation on all three fortified wines are extensively discussed.

The final chapter, Chapter 7, considers “Formation Pathways in Vinification” and discusses the developing flavours and aromas that result at the end of maturity as a result of various biogenesis processes. Again the analogy is drawn between products such as coffee and the development of flavour which is the result of the Maillard reaction. This is the only chapter in this volume where a detailed chemical background would probably be necessary. There are two appendices to this volume both of which will be invaluable reference documents because they list the structure of many of the components that are found in wine and a number of other alcoholic beverages.

Overall this would be an invaluable addition to the library of anybody interested in wine or alcoholic beverages in general. The authors are to be congratulated for their diligence and for the thorough way they have compiled a significant amount of constructive data to produce an excellent book.

Reviewed by Graham G. Stewart
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Beers and Breweries of Britain

Roger Putman

Publication: 2004
Publisher: Shire Publications
Soft cover, 8 × 6 in., 56 p., 70 colour and 9 b/w illustrations
Price: £5.99 (www.shirebooks.co.uk)
ISBN: 0 7478 0606 3

Roger Putman, a Master Brewer, put together this delightful small book. Many of the photos were taken by the author to illustrate the brewing process. There are a number of historical drawings such as an 1808 hand cranked malt mill and photographs of the 1900 Guinness Beer tasting room and the 1948 Whitbread bottling line. This charming book is aimed at those who wish to learn about the basic process and history of beer in Britain. The book can be found in the bookshops at many of Britain’s brewery visitor centers. I thoroughly enjoyed this gem of a book.

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