

## Book reviews

**R. S. Jackson, *Wine Tasting: A Professional Handbook*, Academic Press, San Diego, CA, USA, 2002 (xvi + 295 pp., \$77.95, ISBN 0-12-379076-X).**

Good wine can be described as one of life's greatest pleasures, and has therefore, merited extensive detailed scrutiny from both professional and amateur connoisseurs' perspectives. Carbohydrates of course play a major part in the production of wine and its final qualities. However, no single wine tasting procedure has achieved universal acceptance. This volume details the practical and theoretical aspects of critical wine tasting, in the context of human sensory perception, from the techniques used by professionals to assess wine properties and quality, to the physiological, psychological and physicochemical origins of sensory perception.

The opening chapter provides an introduction to the tasting process, discussing appearance, odour in the glass, in-mouth sensation, finish and overall quality. The second chapter focuses on visual perceptions, providing more detailed information on colour (perception, measurement, and origin), clarity (crystals, sediment, haze, and microbial spoilage), viscosity, spritz and tears. Olfactory sensations are discussed in the third chapter, which provides information on the olfactory system, odorants, stimulation, the chemical functionalities involved, perception and assessment, and off-odours, whilst the fourth chapter presents information on taste, perception, mouthfeel, the chemical compounds involved, and sensations in wine tasting. Sweetness in wines is primarily due to the presence of sugars, notably glucose and fructose, concentrations >0.2% generally being required to generate perceptible sweetness. Most table wines have residual sugar contents below this, and thus generally appear dry. Higher sugar concentrations increasingly contribute to body, and can diminish harsh aspects such as acidity, bitterness, or astringency.

The next two chapters are concerned with the quantitative (technical) and qualitative (general) aspects of wine assessment/tasting, respectively. The former section details the selection and training of tasters, pre-tasting organisation, tasting design, wine terminology, evaluation, and associated statistical analysis, whilst the latter presents information on tasting rooms, provided information, sample preparation, score sheets, sensory training exercises, and tasting situations. The classification of still table wines (white, red and rosé), sparkling wines

and fortified wines (sherry, port, Madeira, and vermouth) are outlined in the seventh chapter, and the vineyard and winery origins of wine quality are explored in the penultimate chapter. Vineyard factors include macro and microclimate, vine species, variety, clones and rootstock, yield, training, nutrition, and irrigation. Winery factors include winemaker, pre-fermentation and fermentation processes, and post-fermentation consequences such as blending, aging in oak, and bottling. The final chapter provides an overview of the historical origins and guiding principles of food and wine combination.

Numerous tables, charts and figures throughout this volume provide excellent illustrative material to support the detailed information presented in text. In conclusion, this comprehensive volume is highly recommended to any individuals involved in wine tasting, from professional tasters and those who train tasters and design tastings, to amateur wine connoisseurs, who want unbiased information on how to maximise their perception and appreciation of wine.

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**Institute of Medicine and National Research Council  
of the National Academies, *Safety of Genetically  
Engineered Foods: Approaches to Assessing  
Unintended Health Effects* (2004, The National  
Academies Press, Washington, USA) xvii + 235 pp.,  
£25.99, ISBN 0-309-09209-4.**

Our understanding of plant crops, microorganisms, and food-animal genetics continues to grow as a direct result of scientific advances in agricultural biotechnology. Genetically modified foods and food products derived from