

## Book Review

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### **Pesticide toxicology and international regulations**

John Wiley and Sons, 2004,  
592 pp; price £95.00.  
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If I had to make a single criticism about this book it would be to say, that although the title is *Pesticide Toxicology and International Regulations*, only 35 pages out of over 500 specifically discuss the topic of international regulation. Considering that in those last three chapters the authors take on the regulatory systems of the EU, the North American Free Trade Agreement (NAFTA) countries and Japan, it is a very cursory introduction to pesticide regulation that may leave environmental law scholars initially searching for their receipts. However, with that said, this is an excellent book for those interested in a thoroughly researched volume of pesticide toxicology that is written with an eye to the harmonization of the international regulatory and risk-assessment frameworks for pesticides.

This well-organized book is divided into six parts covering the major classes of pesticides, as well as some other topics. Immediately following the list of contributors, Marrs and Ballantyne have thoughtfully included a brief primer,

including about six pages of frequently used abbreviations, as well as several pages on toxicity classifications and hazard ratings. Part I of the book contains four chapters on insecticides, including organochlorine insecticides; anticholinesterase insecticides, pyrethrins and synthetic pyrethroids, and finally 'miscellaneous insecticides'. The chapter on organochlorine insecticides gives a toxicological snapshot of the individual pesticides within the class, including: use and production information; structural information in most cases; absorption, metabolism and excretion data; and finally specific toxicity information, including human toxicity data when available. The anticholinesterase chapter has an introduction to the enzyme's structure and function, followed by toxicological mechanisms of AChE inhibition, including types of insecticide and antidote information. There is a large section on regulatory aspects of these compounds, including regulatory values (such as acceptable daily intakes and acute reference doses) for about 30 relevant insecticides. The final two chapters in this section (as well as most of the other chapters in the book) more closely follow the format of the organochlorine chapter.

Part II covers the area of fungicides, herbicides and growth regulators. There are two chapters in this section, one devoted to fungicides and one devoted to

herbicides. Part III is devoted to 'special types of pesticides', including chapters on microbial pesticides and biocides. Part IV, 'Residues', contains a single chapter that addresses the subject of pesticide residues on commodities and their impact on risk assessment. This chapter provides a good overview of how regulatory values such as maximum residue levels are derived. Part V contains chapters on occupational exposure to pesticides, as well as the treatment of pesticide poisoning. Finally, Part VI discusses the regulatory framework for pesticides in the three major commodity markets: the EU, NAFTA and Japan.

This work is well researched and well organized. The authors have obviously done their homework, as most of the chapters are supported by literally hundreds of references, which in and of itself makes the book valuable. As a reference work, this book will prove to be extremely useful to anyone involved in the regulatory toxicology of pesticides. Perhaps Marrs and Ballantyne could be persuaded to organize another volume or two on other environmental contaminants of concern.

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