



This is a unique book on the potential benefits and risks for most classes of legacy and current pesticides. It covers the underlying science involved, is both a textbook for university students, and a comprehensive reference text for professionals.

Pesticides are an increasingly important tool in providing food for all people on earth. They also protect people and their domestic animals from many diseases. Pesticides have played an important role in the history of humans but remain a controversial topic that generates considerable conflict in the public arena. This book gives important information that addresses the basic science of pesticides, their use, as well as alternatives.

Who should use this book?

This is a text-book that helps students and professionals in this field understand the scientific information on all aspects of pesticide development, use, environmental fate, as well as health and environmental effects. It also covers public controversies that have evolved as a result of pesticide accidents, misuse, or misunderstanding of the risks involved. By using the information in the chapters, study questions, and appropriate testing, this book has proven to be excellent for educators and students at the diploma, undergraduate, graduate, and professional levels. The book is a required text for a course at the University of Guelph, ON, Canada.

This book has comprehensive illustrations and diagrams, an index, thorough referencing (more than 450 citations to the primary literature and government reports) as well as the IUPAC glossary of pesticide-related terms (more than 500). It is an excellent reference text for pesticide scientists at all levels of government as well as in the pest management industry.

This is a must-have book for:

Government regulators

Chemical and Agrochemical scientists in industry

Government extension personnel

University faculty

University students

University libraries

Government libraries

Book Chapters

The chapters in the book cover the following topics:

- The pesticide dilemma – the debate over pesticide risks and benefits.
- Pesticide discovery – the history and the future.
- Uses of pesticides.
- Pesticide selection, formulation and application.
- Pesticide uptake and movement in target organisms.
- Important classes of pesticides.
- Metabolism of pesticides.
- Pesticide residue analysis.
- Pesticide residues in food.
- Fate and movement of pesticides in the environment.
- The toxicology of pesticide active ingredients and formulated pesticide products.
- Ecological risk assessment of pesticides.
- Human health risk assessment of pesticides.
- Resistance to pesticides.
- Biotechnology and pest management.
- Minimizing pesticide use.
- Legislation of pesticides.

What others say about this book:

The book is unique because it includes both the use, intended and unintended effects of pesticides together with discussions on legislation and how to minimize pesticide use. I can therefore highly recommend this book to anyone working with or interested in any aspect of pesticide use, effects, or legislation. - Prof. N Cedergreen, University of Copenhagen, Denmark.

About the authors



Gerry Stephenson is a Professor Emeritus in the Department of Environmental Biology at the University of Guelph. During the early 1970s, he co-originated a University course "Pesticides and the Environment". He is an author of several books and chapters in books related to topics such as pesticide biochemistry, pesticides and human health, and pest management in agricultural, forestry and landscape environments. He is a member and current Vice Chair of the Ontario Pesticides Advisory Committee, a Fellow of the Weed Science Society of America, and Canada's representative on the International Union of Pure and Applied Chemistry Advisory Committee on Crop Protection Chemistry. He was a 1994 recipient of the Canadian Award of Excellence for Research in Weed Science and the 2003 recipient of the Weed Science Society of America, Outstanding Teacher Award.



Keith Solomon is a Professor in the Department of Environmental Biology and Director of the Centre for Toxicology at the University of Guelph where he teaches courses in toxicology and pesticides. He conducts research into the fate and effects of pesticides and other substances in the environment, exposure of humans to pesticides and industrial chemicals, and risk assessment. He is a Fellow of the Academy of Toxicological Sciences and received the 2002 American Chemical Society International Award for Research in Agrochemicals. In 2006, he was awarded the SETAC Europe Environmental Education Award and the Society for Environmental Toxicology and Chemistry Founders Award.

Pesticides and the Environment

Authored by Gerald R Stephenson and Keith R Solomon. xii + 425 p. Includes Table of Contents, Bibliographical References, Index, and Glossary. ISBN 978-0-9808847-0-8. This book may be ordered from:

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