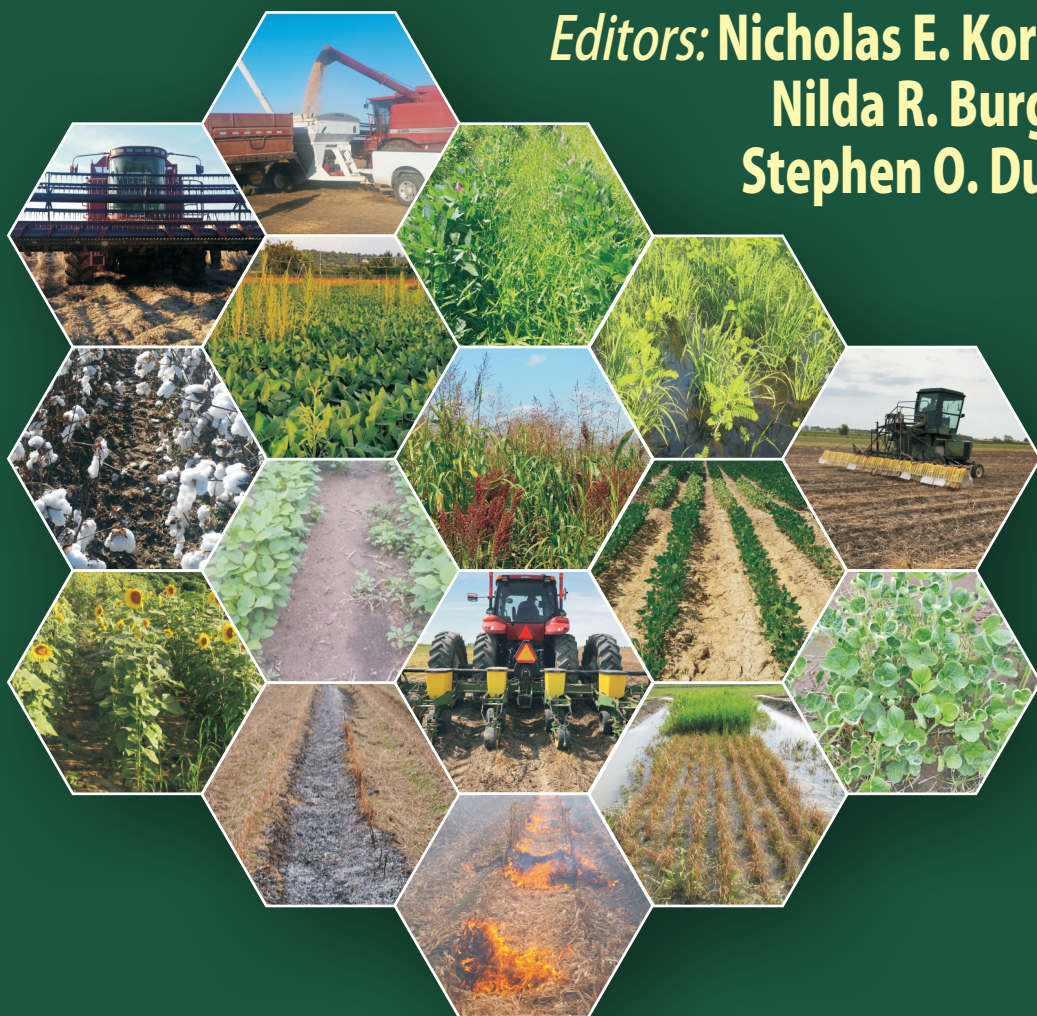


WEED CONTROL

Sustainability, Hazards and Risks in
Cropping Systems Worldwide

Editors: **Nicholas E. Korres**
Nilda R. Burgos
Stephen O. Duke



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A SCIENCE PUBLISHERS BOOK

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Editors

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Preface

In light of public concerns about sustainable food production, the necessity of human and environmental protection, along with the evolution of herbicide-resistant weeds, a review of current weed control strategies is needed. Sustainable weed control requires an integrated approach based on knowledge of each crop and the weeds that threaten it.

Important issues of weed science are thoroughly discussed in the first section of the book. Integrated weed control in relation to weed management along with herbicide and weed management effects on soil and freshwater ecosystems and insects are critically discussed. Occupational hazards due to non-judicious use of herbicides along with hygiene practices, herbicide storage and herbicide regulation are carefully discussed.

The second section of the book is divided into seven sub-sections or crops, namely cereals, row, cash crops, plantations, orchards and grape-yards and root crops. Major weeds and weed control of twenty-two crops of these cropping systems are discussed in terms of mechanical or physical, cultural, preventive and chemical weed approaches. Evaluation of weed control sustainability for each crop within cropping system is also discussed. The use of aromatic plants and essential oils for sustainable weed control along with weed control in grassland and organic farming systems are discussed under miscellaneous cropping systems, the last sub-section of the book.

This book will be an invaluable source of information for scholars, growers, consultants, researchers and other stakeholders dealing with agronomic, horticultural, and grassland-based production systems. The uniqueness of this book comes from the balanced coverage of the best weed control practices of the most important cropping systems worldwide that minimize herbicide effects on humans and the environment. Furthermore, it amalgamates and discusses the most appropriate, judicious and suitable weed control strategies for a wide range of crops. It reviews the available information and suggests solutions that are not merely feasible but also optimal. The reader will gain in-depth knowledge of both cropping systems and their related weed control. He/she will also be able to learn the principles of sustainable weed management, which are now more needed than before, and of alternative non-chemical weed control strategies for a wide range of crops around the world.

Despite the great effort that authors, editors, and reviewers have invested in this work, mistakes may have been made. We would like to ask readers to inform us of any mistakes or omissions that they find, as well as suggestions for future improvements by mailing us at the following e-mail addresses quoting “**Weed Control: Sustainability, Hazards and Risks in Cropping Systems Worldwide**”.

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