

Preface

The idea of putting together this book stemmed from a successful International Workshop on Allelopathy at Faisalabad, Pakistan during March 18–21, 2007. The workshop was organized in collaboration with University of Agriculture, Faisalabad, Pakistan, International Allelopathy Society and Higher Education Commission, Pakistan. Prof. Yoshiharu Fujii, then President, International Allelopathy Society proposed to compile the selected papers in the form of a book. Selected papers presented at this workshop and some additional invited chapters constitute this volume.

Efforts on understanding mechanisms of production of allelochemicals, their release into environment, influence on the neighboring plant, the mechanisms of action of allelochemicals at molecular level, their influence on soil, and ultimately the application of all these in the management of natural and agricultural ecosystems are the subject of interest for those engaged in allelopathic research worldwide. This involves scientists from an array of disciplines as analytical chemistry, botany, plant physiology, ecology, soil chemistry, microbiology, molecular biology and scientists from agronomy, horticulture, genetics, breeding, plant protection, and many others. The techniques and tools employed are as diversified as the disciplines. Research efforts in this emerging discipline of science has shown that allelopathy has promising solutions to many of the problems in contemporary agricultural systems. We felt that it is timely to collect and synthesize the latest developments on allelopathy research with special emphasis on its application in agricultural systems. We divided the contents of the book into four parts: (1) allelopathy from ecological perspectives, (2) allelopathy in agricultural systems: some case studies, (3) allelopathy in pest management and crop production, and (4) allelopathy: some emerging concepts.

A total of 45 researchers from 17 countries contributed chapters on various aspects of allelopathy. We thank the authors who responded to our call and contributed. We thank Springer for accepting our proposal for this book, especially Dr. Christina Eckey and Dr. Andrea Schlitzberger for keeping faith in us despite the long delay in completing the task.

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Allelopathy

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