Introductory

CHEMICAL ECOLOGY OF INSECTS AND PLANTS

Jamin Ali

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Preface

This book provides a brief introduction to chemical ecology and its importance in integrated pest management (IPM). Excessive use of synthetic pesticides is polluting our environment at an alarming rate; chemical ecology can be employed as a useful alternative to utilize naturally produced plant volatile compounds to control pests under field and storage conditions. The book contains chapters on the concept of chemical ecology, semiochemicals, plant volatiles synthesis and their role in pest management. Moreover, the book presents how chemical ecology of plants and insects can be employed effectively to suppress pests population in the field. Prepared with basic concepts and importance of chemical ecology, this book aims to provide a quick and clear idea about introductory outline of chemical ecology to undergraduate students, botanists and people working in agriculture and related field. I deeply acknowledge the enthusiastic motivation of my parents, collaborators, and friends without whose help this book would have only been a dream.

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About Author

Mr. Jamin Ali, Research Scholar at Keele University, UK, has done Master's in Zoology (Entomology) from Aligarh Muslim University, India. He is applied insect chemical ecologist whose expertise lies at the interface of ecocology, bilogy and chemistry. His research focus on using insect and plant derived semiochemicals to develop novel tools for sustainable management of phytophagous insect pests in global agricultural environments. His general research interests focus on exploiting the chemical ecology of tritrophic interactions to ensure global agriculture system can support an increasing human population. He is also interested in developing data-driven approaches to inform integrated pest management decision in horticultural production systems.

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