The book is a product of a workshop at the 15th Congress of the European Rural Sociological Society in 1993. Papers developed and later refined by 25 renowned international authors provide a comprehensive review of farmer attitudes and learning, facilitation, supportive institutions, and policies and platforms for agricultural use negotiation. More than 500 references are cited across the five sections of the book providing the reader with a comprehensive and timely review of recent and relevant literature. Written by a refreshing blend of contributing international social and biological scientists, it embodies a balanced discussion and educational approach for meeting the needs of a sustainable agriculture: production, environmental, and social. The authors contribute through detailed case histories and studies illustrating both successes and challenges to learning from both the farmer and the educators' perspective.

The opening chapter guides the reader through the book and provides a well-organized background and preview for the following chapters. The fundamental interlocking components leading to a transformation to a sustainable agriculture which are addressed in the book are agricultural practices both at the farm and higher system level, learning the practices, facilitation of the learning, supportive institutional frameworks, conducive policy frameworks, and the management of a change from conventional to a more sustainable agriculture across these elements.

Of particular strength are the lessons learned and experiences gained in policies seeking to promote sustainable agriculture in Greece, Switzerland, and the Netherlands. An additional section speaks to the facilitation and farmer learning experiences and supportive institutions drawing examples from Asia, the Netherlands, Germany, Indonesia, and Australia. These examples are models for future study.

A later section gathers findings from the ecosystem level on the platforms for natural resource use negotiation and includes results from the USA, Australia, and the Netherlands. Elements of individuality, institutions, rural communities, and policy are introduced and highlighted. The worldwide examples in the book serve to show commonality of issues, challenges, and shared learning opportunities in dealing with facets of sustainability, producers, education and facilitation. The final chapter is a must read for the extension educator. It pulls together the fundamental components and lays out the thesis of the book: the dynamic interface of the people and the environment. It leads the reader to the implications for learning and facilitation for the future educator and the policies and institutional support required for a more ecologically sound agriculture.

This book certainly introduces a number of new terms and approaches not normally embraced in current campus teaching classrooms and extension educational programs related to production agriculture. It, however, is an easy read and stimulates the educator to strive to be a new learner and ultimately a better facilitator in educational approaches.

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The search for environmentally safe methods of agricultural pest control has stimulated increasing interest in understanding more about the natural defenses of plants. One of the largest group of naturally occurring plant defense compounds is the alkaloids, a group of over 12,000 nitrogen-containing compounds that have been used by humans as poisons, stimulants, sedatives, and medicinal substances for thousands of years. Alkaloids are found in approximately 20% of flowering plants, including crops such as potato, tomato, tobacco, and the cereals. This multi-author book offers a broad, readily accessible overview of the biology and biochemistry of alkaloids. It is the first single volume treatment of the subject to appear in nearly twenty years, and provides a welcome, up-to-date coverage of this active area of research. Well written, superbly organized and nicely indexed, it will serve as an excellent introduction and convenient reference for students, teachers, and researchers at all levels of training. The editors, Margaret Roberts and Michael Wink, are both well-known members of the alkaloid research community and their familiarity with the subject matter is responsible for much of the success of this volume.

The book divides its coverage of alkaloids into four parts: history of human use, biochemistry, ecology, and medicinal applications. The first part includes two fascinating chapters—a lively introduction into the social uses of alkaloids in human history, followed by a detailed anthropological and pharmacological survey of arrow poisons, some of which are still used in Africa and South America for hunting and tribal warfare.

The second part is organized around the theme of alkaloid biochemistry. After a short, candid survey of the value of alkaloids as taxonomic markers, there are several informative chapters on the biosynthesis of plant alkaloids followed by two excellent contributions on alkaloid physiology. The latter two chapters discuss the response of alkaloids to environmental and biological stresses and how alkaloids are stored, transported, and catabolized in plants. Both are unique, lucidly written and well-researched perspectives that fill a large void in the alkaloid literature.

Readers with an agricultural background will especially value the third section of the book, which deals with alkaloid ecology. It begins with two chapters written by Michael Wink, one of the two editors. Professor Wink, who has authored or co-authored nearly one-third of the book, has a gift for summarizing vast amounts of specialized literature for a general audience. In his chapter on the chemical ecology of alkaloids he develops the thesis that alkaloids serve plants mainly as defenses against herbivores and pathogens. Although guilty of occasional oversimplification, he marshals an enormous volume of evidence (including many figures and tables from his own work) for the defensive importance of alkaloids. In the following chapter on alkaloid mode of action, Wink does another outstanding job in summarizing the vast literature on the physiological targets of alkaloids. This is required reading for those who think that alkaloids only act on vertebrate nervous systems. Next, come two interesting reviews on the involvement of alkaloids in allelopathy and the interactions between parasitic plants and the alkaloids of their hosts, both areas of only limited knowledge. The section finally concludes with two stimulating chapters on the occurrence and function of alkaloids in animals, including arthropods, amphibians, and marine organisms.

The final part of the book comprises two detailed contributions on the applications of alkaloids in modern medicine. The first is a well-written, in-depth treatment of alkaloids with antimicrobial activity, and the second a summary of the medicinal uses of over 40 well-known alkaloids. The latter is a wonderful compendium of information, but would be somewhat more useful if it provided additional references to the literature.

The editors have fashioned a comprehensive, accessible