

Book review:

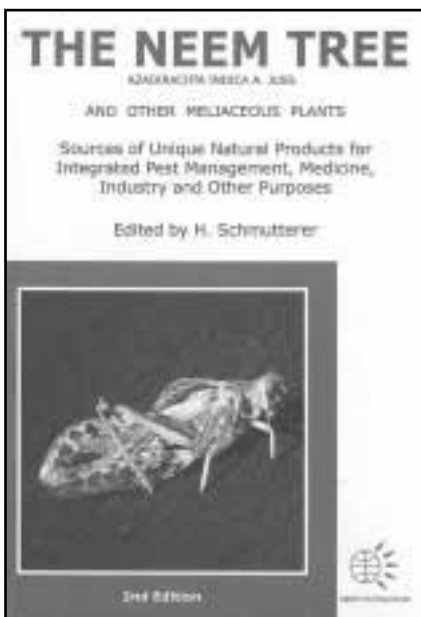
The Neem Tree

**Azadirachta indica A. Juss.
and Other Meliaceae
Plants**

Sources of Unique Natural
Products for Integrated Pest
Management, Medicine,
Industry and Other Purposes.

Editor of the 2nd Edition,
H. Schmutterer. Cost \$85.

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This is the most comprehensive and best illustrated book of the fascinating Indian neem tree (*Azadirachta indica*) and its unique substances.

The extracts from the tree have an enormously broad range of applications. The main substance azadirachtin influences the hormonal system of insects, and has the effect of a pesticide. Feeding activity, reproduction and flying ability of insects are also affected. Azadirachtin has a very low toxicity to mammals, is biologically degradable

and can be easily extracted from the seeds of the tree. Side effects on non-target organisms are slight.

Other important uses of neem tree products are:

- Cure of diseases of man and animals
- Population control
- Manure and nitrification inhibitors
- Feeds for domestic animals
- Soap production

With this exhaustive treatment of the neem tree and closely related plants, this book provides us with an impressive example of the varied uses of renewable resources in sustainable agriculture and elsewhere.

Neem (*Azadirachta indica*) derivatives are providing new insect pest control compounds that reduce our reliance on the use of synthetic chemicals, many of which are known to be detrimental to the environment and human health.

The neem tree has been acclaimed as a tree which can solve global problems. In addition to pest control, compounds from this long revered tree have been used in human and veterinary medicine, in birth control, and as a shade tree and source of fuelwood. No wonder that with the world-wide and constantly growing interest in neem, Prof. Schmutterer's classic volume 'The Neem Tree - Source of Unique Natural Products for Integrated Pest Management, Medicine, Industry and Other Purposes', which was published in 1995, has sold out and has been out of print for several years.

Prof. Schmutterer, the leading authority on neem, has put together chapters written by him and by some of the most eminent experts in the world, on a wide range of topics which have great relevance to current neem research and applications. This book deals with the remarkable effects of azadirachtin and other neem compounds and provides in depth explanations of the basic concepts and interpretations.

The chapters provide a comprehensive outline of the characteristics of the miraculous tree and the effects the

plethora of biologically active compounds have on insects. Coverage includes the action of neem derivatives on molluscs, crustacea, mites, viruses, bacteria, protozoans, fungi and nematodes. Several chapters are devoted to the important aspects of neem in integrated pest management. Five completely new chapters have been added and most other chapters have been revised and updated.

A chapter on neem tissue culture methods and *in vitro* production of limonoids discusses the prospects for manufacturing neem compounds outside the tropics, by using *in vitro* techniques. A new chapter elucidates the action of azadirachtin on plant cells. A detailed discussion of neem applications to control pests of rice plants has also been added. Other new chapters are devoted to the toxicity of neem on birds and fishes, and to the use of neem in veterinary medicine. Of special interest is the revised chapter on human fertility and birth control, and on neem's effects on pathogens of the genital tract.

Contributors of the book are all internationally known for their work on various aspects of neem. Research and extension workers, who need to keep up to date on this large area, will find a satisfyingly complete summary of the state of art in this one volume. Readers will be grateful to the editor for this labour of love. I am convinced that this book will be widely read and used, because the revised and updated edition is providing the only comprehensive book exclusively concentrating on the importance and potential of neem and closely related plants like *Melia azedarach*. This important volume is essential reading for anyone interested in biological control, integrated pest management, crop protection and ecology.

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