



Pesticides : Myths and Facts, Notion Press, 2021. 330 pages

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Pesticides are one among the most misunderstood entities in the world. Being anathema for most people, administrators and even many scientists find it difficult to support and justify use of pesticides. History shows that the human kind has been experimenting with a variety of toxins to protect his crops and finally ended up with an array of synthetic chemicals. These are toxic chemicals, however, when diluted and used as prescribed, they are safe, like a wild elephant which is tamed. Many protocols, developed over time, are in place to study the acute and chronic poisoning effects in laboratory animals, which can be extrapolated to humans. Around 80 different types of tests with well-defined protocol are conducted. The acute toxicity tests include estimation of LD₅₀ values allergenicity, skin and eye irritation etc. The chronic toxicity studies investigate carcinogenicity, mutagenicity, developmental toxicity, teratogenicity and so on.

Those molecules which are proven to be carcinogenic or mutagenic during the preliminary screening are summarily rejected. Thus usually out of only one in 15000 promising molecules will be taken forward for further studies. To protect the users and consumers, different indices like Acceptable Daily Intake (ADI), Maximum Residue Limit (MRL), Acute Reference Dose and Waiting period are worked out. To overcome the limitations of laboratory studies, reviews are conducted periodically which also examines the adverse impact of the chemical in field situations.

However, even with all these precautions and safety measures, pesticides are still misunderstood mostly because of the mass chemophobia among the

people. The chemophobia mainly have its roots in the much publicised 'Silent Spring' by Rachel Carson, who wrote "Chemicals are the sinister and little recognized partners of radiation... Entering into living organisms, passing from one to another in a chain of poisoning and death". Her heart moving but exaggerated description of a 'Silent Spring' due to use of DDT shocked many generations and the awe is still continuing. Many other events added strength to this feeling and presently all are looking for pesticide-free food produced through organic agriculture.

There are very few voices that explain the facts about pesticides. Dr. Eugene Sebastian Nidiry, former Principal Scientist, ICAR- IIHR has taken up the role of devil's advocate. In his book "Pesticides: Myths and Facts" the basic science of pesticides are explained. From second chapter onwards, different myths about pesticides and their rebuttal are explained. What is outstanding about this rebuttal is the extensive use of statistics and data to nail the arguments so beautifully. For example in chapter 9, on the alleged relationship between pesticides use and cancer, 18 tables and 10 graphs which clearly explain the topic and drives home the rebuttal: "the correlation existing between pesticide use and higher incidence of cancer is spurious. Higher percentage of cancer deaths is due to lower death rate and higher life expectancy, achieved mainly through modern medicine and modern agriculture". Thus the book refutes 12 common myths about pesticides. The reader is likely to have differences of opinion, however, in case he wants to prove a point, he also has to present credible data, which is the way of science and logic.

This book will be an asset to any library and agricultural scientist and extension worker. Data gives information and information gives knowledge and knowledge gives wisdom. The author did not look into the much hyped Endosulfan 'tragedy' of Kasaragod, probably due to unavailability of data. May be in the next edition, the real side of the

Endosulfan 'Tragedy' can be incorporated. Scientific temper is an important quality required for any citizen. Continuous learning is inevitable to check one's preconceived notions. I recommend this book to the academia and intelligentsia of the country and liberate themselves from the detention of Silent Spring.

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