Laboratory Training Manual on the Use of Nuclear and Associated Techniques in Pesticide Research. Technical Reports Series No. 329. - International Atomic Energy Agency, Vienna 1991. 264 pp.

This publication represents an excellent comprehensive manual for all interested in the use of nuclear and associated techniques both in pesticide residue analysis and in other areas of biological and chemical research. The following chapters are covered: 1) Properties of radionuclides and radiation, 2) Radiation detection and measurements of radioactivity, 3) Radiation protection, 4) Tracer methodology, 5) Radiation biology, and 6) Introduction to practical work. Readers of Biologia Plantarum may be interested in practical exercises such as: Absorption and metabolisms of insecticide after foliar application to plants, Use of autoradiography to study systematic activity of a pesticide after application to the roots of a plant, Pesticide residues in plants, *etc.* Very useful information can be found in the Appendixes, *e.g.* radioactive waste control and disposal, radioactive decay low, characteristics of some common radionuclides used in biological research. The Manual contains a Glossary and a list of SI units.

T. GICHNER (*Praha*)

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Volume 53. Occupational Exposures in Insecticide Application, and Some Pesticides. - International Agency for Research on Cancer, Lyon 1991. 612 pp. Sw. Fr. 95.00.

About 10 - 30 % crop losses caused by pests are reported for developed countries, but in developing countries the losses are estimated to be in the range 40 - 75%. This volume of the IARC Monographs deals with the genotoxic risks from exposures to 8 insecticides (Aldicarb, Chlordane, Heptachlor, DDT, Deltamethrin, Dichlorvos, Fenvalerate, Permethrin), 4 fungicides (Captafol, Pentachlorophenol, Thiram, Ziram) and 5 herbicides (Atrazine, Monuron, Picloram, Simazin, Trifluralin). Each pesticide evaluated contains data on chemical and physical properties, use, occurrence, production, occupational exposure and on toxic, carcinogenic and genetic effects. Some of the pesticides were evaluated in the previous IARC Monographs, but owing to the availability of new data, the genotoxic risks of the compounds are re-evaluated. Appendix I: "Summary tables of genetic and related effects", covers available data on DNA damage, gene mutations in nonmamalian systems (prokaryotes, lower eukaryotes, plants, insects) and in mammalian systems *in vitro* and *in vivo*, and further data on chromosome aberrations, sister chromatid exchanges and cell transformation. Appendix II presents activity profiles for genetic and related events, with the lowest effective and highest ineffective doses for the used bioassays.

T. GICHNER (*Praha*)