Book Review

Bertaux, F. et al. 2002. Recueil des Effets non Intentionnels des Produits Phytosanitaires [Evaluation of Non-Intentional Effects of Plant Protection Products] ACTA, Paris, 499 pp. ISBN 2-285794-207-9.

Chemical pesticides are broadly used for protection of cultivated plants against damage made by pests, diseases and weeds. However, chemical and biological plant protection products can cause some unwanted side-effects such as (1) intoxication of honey-bees and other beneficial insects, (2) induce resistance in populations of pests and phytopathogenic microorganisms; (3) decrease quality of plants or plant products due to phytotoxic effects or residues.

In order to develop integrated pests management programmes and to avoid development of resistance of pests to pesticides it is necessary to have proper knowledge on environmental side-effects of all chemical and biological plant protection products.

Such problems are considered in the reviewed book prepared by a group of specialists designated by the French Plant Protection Service, the Union of Producers of Plant Protection Products, and the Association Coordinating Agricultural Techniques. The "Group on Side-Effects" established in 1971 prepares periodically reports which are of great value to plant protection specialists. The reviewed report is based on data taken from 3008 references and presents information not only on the safety or toxicity of various ingredients to noxious and beneficial organisms but also provides information on pesticide residue monitoring in plants and plants products including wine.

Part "Presentation of non-intentional effects of plant protection products" (p. 19–73) provides general information on the role of beneficial organisms (pathogens, parasites, predators) in reducing abundance of pests and diseases of cultivated plants. The role of beneficials can be greatly reduced by an improper use of chemical pesticides and this fact must be always considered while selecting proper active ingredients and commercial products. This part contains many interesting information on preventing development of resistance of pests to pesticides, characterizes various types of side-effects of use pesticides that may affect even fermentation processes and decrease the quality of wine.

Part "Review of active substances" (p. 75–363) makes the main body of the book. Here an interested reader finds explanations how side-effects should be evaluated and interpreted. Of special interest and value is the tabulated list of 515 active substances with detailed characteristic on their effect towards various species of beneficial arthropods, entomopathogenic nematodes and microorganisms used in biological plant protection. The effect of these substances is presented in tables in graphic form according to the following scale: no effect, low toxic, medium toxic, toxic, very toxic, contradictory data.

Part "Range of effects" (p. 365–433) contains detailed data on range of effects of active ingredients on beneficial organisms and noxious organisms using the scale mentioned above. Of special interest are data on phytotoxic effects of various products to cultivated plants and discussion concerning preventing of development of resistance in populations of arthropods and plant pathogens.

Part "Evaluation methods" (p. 433–440) informs on the way and formulas used for toxicity evaluation and classification of active ingredients.

Part "Bibliographic references" (p. 441–492) lists 3008 references (author and journal) from which data were taken on effectiveness or toxicity of active ingredients mentioned throughout the book.

Without any question this book contains a great volume of information highly valuable to entomologists, phytopathologists, herbologists and to plant protection advisors.

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