International Short Course

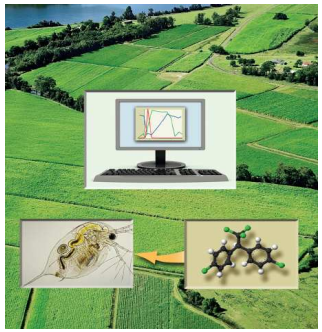
Environmental Risk Assessment of Plant Protection Products: Tools, Legislation and Recent Developments

- 21 April 2009 -

Aims and Objectives

Ecotoxicology emerged in the 1970s as the environmental branch of the field of toxicology. As a consequence, its major focus was on investigating the impacts of chemicals on individuals, rather than populations, communities, or ecosystems. During the past decade, considerable progress has been made towards the integration of some level of ecology into decision making with the development of several new ecotoxicological approaches.

The present course provides a brief overview of the various ecotoxicological tools presently in use and their role in the Environmental Risk Assessment of Plant Protection Products. In addition, up-to-date statistical techniques for the analysis of complex data sets from (model) ecosystem studies will be presented. Recent developments in ecotoxicological risk assessment approaches, i.e. Species Sensitivity Distributions and the MASTEP recovery model, will also be outlined. Two case-study presentations are included to tackle two main actual research discussions: 1) risk assessment of pesticide mixtures; and 2) the spatial extrapolation of toxicity data over climatically different regions.



Target Group

This course is intended for anyone interested in ecotoxicological studies, including policy makers, consultants, researchers, NGO staff and B.Sc. or M.Sc. Students*. Previous experience in ecotoxicologicy is not a must, and the course will provide a comprehensive basis for people intending to initiate activities in this research field. People with previous ecotoxicological experience will also find the course of great value the more as it includes various recent developments and research topics.

* Attandance to the course may be mentioned in the supplement to the B.Sc. or M.Sc. diploma of ISA

Programme

9.30 – 10.00 Registration
10.00 – 10.15 Welcome and Introduction (MJC)

PART I: TOOLS

10.15 – 11.00 Use of Cost-Effective Laboratory Bioassays for the Toxicity Evaluation of Groundwater and Surface Water (MJC)
11.00 – 11.15 *Coffee break*
11.15 – 12.00 The Model Ecosystem Approach to Evaluate Side-Effects of Pesticides on Freshwater Life (MD)
12.00 – 12.45 Use of Univariate and Multivariate Statistical Techniques for the Analysis of Ecological and Ecotoxicological Data (PvdB)
12.45 – 13.45 *Lunch*

PART II: LEGISLATION

13.45 – 14.45 Registration Procedure of Plant Protection Products in Europe (PvdB)

PART III: RECENT DEVELOPMENTS

14.45 – 15.30 The Use of the Species Sensitivity Distribution (SSD) Concept in the Risk Assessment of Chemicals (PvdB)
15.30 – 15.45 *Coffee break*
15.45 – 16.30 MASTEP – an Individual Based Model to Predict Recovery of Aquatic Invertebrates Following Pesticide Stress (PvdB)

PART IV: CASE STUDIES

16.30 – 17.15 Exposure of Freshwater Resources to Agrochemical Mixtures and Effects on Aquatic Biota in the Tagus Vulnerable Zone (MJC)
17.15 – 18.00 Spatial Extrapolation in Ecotoxicology: Use of Temperate Toxicity Data for the Risk Assessment of Pesticides in Tropical Areas (MD)
18.00 – 18.30 Final Considerations (MJC)

Lecturers

Prof. Dr. Paul J. van den Brink (PvdB) is a professor of chemical stress ecology and works at the research institute Alterra and the Aquatic Ecology and Water Quality Management Group of Wageningen University, both belonging to the Wageningen University and Research centre (the Netherlands). Paul van den Brink is the current president of SETAC Europe (Society of Environmental Toxicology and Chemistry) and editor of the journal Environmental Toxicology and Chemistry.

Prof. Dr. Maria José Cerejeira (MJC) is an associate professor with agregation at *Instituto Superior de Agronomia* (ISA) – School of Agronomy, belonging to the Technical University of Lisbon (UTL; Portugal). She is President of the Plant Protection and Phytoecology Department at ISA and has been involved in various national and international R&D projects into the fate and effect of pesticides, particularly in the aquatic environment.

Dr. Michiel A. Daam (MD) is a research scientist working at the Ecotoxicology Laboratory of ISA/UTL. He has been involved in various studies into the scientific underpinning of ecological risk assessment procedures, including the influence of climatic conditions on pesticide fate and effects. For this, he conducted and has been involved in several model ecosystem studies in temperate as well as tropical countries.

Contact

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Location

Instituto Superior de Agronomia (ISA)
Tapada da Ajuda 1349-017 LISBOA

Fees & Registration

The fee for this course is **€ 100** (includes coffee). The number of candidates is limited to a minimum of 10 and a maximum of 25.
Participants will be awarded a certificate of attendance.

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Online application (until 2 April) via:
www.isa.utl.pt/home/node/3107