

Field studies with non-target arthropods (NTA) are increasingly used in the higher-tier of the pesticide risk assessment to assess the risk of pesticide use for NTA both in-crop and off-crop. Because recovery is a critical endpoint field studies often generate long term time series involving a myriad of taxa. Sophisticated statistical techniques are needed to analyze such complex data sets. Whereas guidance for conducting NTA field studies is limitedly available, guidance for summarising and interpretation of study results is lacking. Therefore the Dutch Platform for the Assessment of Higher Tier Studies (PHTS) has drafted a guidance document for summarising and evaluating higher tier studies with NTA. The poster presents the main items of the guidance document, and will discuss the questions that have to be solved for a sound evaluation of NTA field studies.

MO 340

EU workshop on linking aquatic exposure and effects in the registration procedure of plant protection products (ELINK)

Theo Brock¹, Anne Alix², Colin Brown³, Ettore Capri⁴, Bernhard Gottesbueren⁵, Fred Heimbach⁶, Chris Lythgo⁷, Ralf Schulz⁸, Martin Strelöke⁹

¹Alterra, WAGENINGEN, The Netherlands

²AFSSA-DIVE, MAISONS ALFORT, France

³University of York, YORK, United Kingdom

⁴Universita Cattolica del Sacro Cuore, PIACENZA, Italy

⁵BASF, LIMBURGERHOF, Germany

⁶RIFCON, LEICHLINGEN, Germany

⁷EFSA, PARMA, Italy

⁸University Koblenz-Landau, LANDAU, Germany

⁹BVL, BRAUNSCHWEIG, Germany

The principle objective of the ELINK workshop was to bring together specialists in aquatic exposure and effects assessment, to improve guidance on linking exposure and effects in the aquatic risk assessment procedure for pesticides under the Plant Protection Products Directive 91/414/EEC. The ELINK workshop was the first workshop organized in Europe in which fate and effect experts played an equal part. The participants consisted of around 53 invited scientists from different EU Member States, representing government, industry and academia. During the workshop a decision scheme was produced how to link exposure to effects in the risk assessment procedure of plant protection products. The guidance document provides recommendations on:

- The use of generalized exposure profiles in the design of ecotoxicological tests
- The use of peak or Time Weighted Average (TWA) concentrations in the risk assessment
- Linking exposure and effects in higher-tier risks assessments based on refined exposure tests, SSDs and micro/mesocosm experiments
- Model approaches (Toxicokinetic and toxicodynamic modelling; population and community models)
- The use of ecological field data.

MO 341

Will the implementation of environmental hazard criteria in EU pesticide regulation remove the need for risk assessment?

David Arnold

Consultant, CAMBRIDGE, United Kingdom

Risk Assessment is a paradigm that has been applied to plant protection product regulation for many years (enshrined in Directive 91/414/EEC), whereby unacceptable exposure or effects can be ameliorated through refinement of either exposure concentrations or effects assessments to achieve an acceptable level of risk. An increasingly precautionary approach to the regulation of chemicals has led to the proposal to screen out chemistries with properties which do not pass certain hazard endpoints (persistence, bioaccumulation and toxicity). Unlike general chemicals under REACH legislation, pesticides have to have inherent toxicity against the target pest/disease, and persist for long enough to work effectively, in the interests of maintaining adequate food supplies in an increasingly populated world. Having developed a highly intelligent approach to environmental risk assessment to ensure that such chemicals can be used effectively subject to certain risk management criteria (based on risk assessment), will risk assessment itself become redundant when so many active substances will not pass the newly imposed hazard criteria.

MO 342

Future use of substance-inherent properties for regulatory decision making of actives for plant protection

Balthasar Smith, Martin Strelöke, Christine Kula, Ralf Fischer, Petra Pucelik-Günther

BVL Federal Office of Consumer Protection and Food Safety, BRAUNSCHWEIG, Germany

Which of the presented data required for plant protection products authorisation should be used to address cut-off criteria concerning environmental issues like persistence, bio-accumulation, toxicity, endocrine disruption, long range transport.

As a novelty and new challenge in the regulation of plant protection products also substance inherent properties are planned to be used as a final cut-off criteria for authorisation. Current EU-regulation on the authorisation of plant protection products is very much based on risk assessments, where risk is defined as a ratio factor between the predicted exposure concentration and eco-toxicological endpoint.

Some work has been done on the possible impact of cut-off criteria in the matter of availability of active substances. It has been clearly demonstrated that one central issue will be the development of guiding principles regarding how the relevant criteria are used.

Relevant trigger schemes for identification of POP, PBT and vPvB substances are defined in the REACH-regulation. These trigger values are not very specific and it is therefore difficult to make consistent decisions without further guidance. As regards active substances of plant protection products the huge data packages are critical because there are often several results for some trigger values. An overview of the data which are usually available for each trigger is presented. Examples are given where only the amount of existing data is the driving factor for decision-making. For compounds with adverse properties, higher-tier or monitoring study data are often available. Nearly no experience exists for decision-making based on properties like endocrine disruption or long-range transport.

MO 343

Site-specific risk assessment for birds: critical issues in current risk assessment procedure

Serenella Sala, Marco Vighi

University of Study Milano Bicocca, MILANO, Italy

In landscapes influenced by intensive agriculture, the knowledge of the potential impact of pesticides on natural communities is important for protecting biodiversity. The Guidance Document on Risk assessment for birds and mammals and the current methods to perform ecotoxicological risk assessment take into account pesticide properties (application rates and patterns, physical-chemical properties) and bio-ecological characteristics of birds (weight, feeding rates, ecology and behaviour, role in the food chain). A site-specific approach is proposed to perform a refinement of the risk assessment at different scales, taking into account several critical issues related to the risk assessment procedure (availability of toxicological data, extrapolation of toxicity data, choice of focal species etc). A Gis-based risk assessment procedure was proposed to upscaling the approach. Detailed information on landscape and agriculture (land use, pesticide application, etc.) was available and the structure of the bird community was experimentally determined through field observations. In this study an application is presented and critical issues related to result are discussed.

MO 344

A cumulative assessment of pesticides in Europe

Alberto Pistocchi¹, Robert Loos¹, Pilar Vizcaino²

¹EC JRC, ISPRA, Italy

²JRC, ISPRA, Italy

We use a simple GIS-based screening model to compute pesticide concentration in soil and surface water, with reference to the full list of pesticides reported as used in agriculture in Europe. The model is based on the apportionment of used quantities of pesticide, derived from EUROSTAT reports, to land cover classes described by the Corine Land Cover 2000 map, and subsequently accounts for mass balance of pesticides in soils, phase partitioning, and loading to the stream network.

Comparison with monitoring data highlights the applicability and limitations of the approach, showing that it is possible to provide a first approximation of predicted environmental concentrations in soil and surface water.

We therefore provide an estimate of concentration for each individual pesticide, and we combine the different concentrations in a weighted summation by using ratios of a threshold concentration (such as LC50 or NOEC, depending on the endpoint considered) as weights. We show how the resulting weighted sum, an indicator of