
IV. Honey bee poisoning incidents and monitoring systems

Monitoring effects of pesticides on pollinators – a review of methods and outcomes

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Abstract

Monitoring studies, in the context of the environmental assessment of Plant Protection Products (PPP) or pesticides, aim at getting feedback regarding the fate and/or effects of active substances and/or their relevant degradation products in/on the environment, when PPP are used under realistic conditions for crop protection. These studies complement the risk assessment performed in application of Regulation 1107/2009/EC, which aims at identifying the conditions of exposure of organisms in the environment, the conditions of occurrence of risks if necessary and propose appropriate risk mitigation measures.

In this context, monitoring studies may be implemented for different reasons. Firstly, they may complement the risk assessment in addressing possible uncertainties that may not have been fully addressed through field studies for time/space scale reasons. Secondly, they may address issues that are out of the scope of the pesticide regulation, as they can explore possible effects in the real life where organisms are subject to other stressors in addition to the product of concern. Thirdly, monitoring studies are also a way to validate or adjust the risk mitigation measures that may have been recommended as a condition of approval of the product. Monitoring studies may also be a source of data that could feed into risk assessment tools and calibrate ecological models. In the frame of Directive 2009/128/EC monitoring data might be used in connection with relevant risk indicators.

To date, there exists no harmonized guidance on monitoring methodology as monitoring has been implemented for the purpose of addressing the questions raised by regulatory authorities. There is no guidance either to define and implement monitoring studies that could be undertaken in a post-registration context as for those recommended in Directive 2010/21/EC. Work is currently being undertaken to address this issue in a dedicated working group of ICPBR for honey bees as well as in a SETAC Advisory Group on Monitoring Environmental Effects of Pesticides (<http://www.setac.org/node/483>) for terrestrial invertebrates.

This presentation will give an overview of the existing approaches for monitoring, ranging from (i) large scale incident reporting systems implemented at the national level, (ii) pilot apiary focused monitoring aimed at conducting more detailed investigations designed to adjust conditions of use of a product and (3) risk mitigation measures. A proposal on their analysis and respective input into risk assessment procedures and risk management planning is discussed.