

Influence of some experimental conditions on the results of laboratory toxicological tests on honeybees

Piotr Medrzycki*, Fabio Sgolastra, Gherardo Bogo, Simone Tosi, Simone Venturi

*Agricultural Research Council, Research Unit for Apiculture and Sericulture; Via di Saliceto 80, 40128 Bologna, Italy

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Abstract

The official guidelines for the assessment of the risk of pesticides on honeybees are based on specific protocols. They contain the procedures that must be applied in order to make the results usable for the pesticide registration process. The described test conditions must be respected to make the result valid.

Often for some of these parameters a broad range of values are acceptable. For example the EPPO guidelines allow to run laboratory toxicity tests at the temperature of $25\pm 2^{\circ}\text{C}$.

In our studies we have noticed that the LD50 value may vary significantly within this temperature range. Thus the current guidelines allow to the subject interested in pesticide registration to run toxicity tests at such a temperature level that produces less effects.

The present contribution is aimed to discuss some of the test parameters (like temperature, alimentation, sanitary conditions, bee sampling method) that may significantly influence the results of toxicity tests.

Proposals for improvement of official risk assessment guidelines are also provided.