Biocides and pesticides* perspective on the risk assessment for pollinators: ECHA and EFSA bee guidance and developments for other pollinators

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Introduction

ECHA bee guidance1 presents an approach to assess the risks of biocides to bees (honey bees, bumble bees and solitary bees) with the aim of ensuring a high and harmonised level of protection of the environment. The revised EFSA bee guidance for plant protection products (PPPs)2 was taken as reference when developing the ECHA bee guidance with specific adaptations to accommodate biocidal products’ exposure scenarios.

Comparison of risk assessment for biocides and PPPs

Divergences

- Scope: biocides focus on active substances with an insecticidal mode of action, while all mode of actions are considered for PPPs
- Biocide-specific sources of exposure (see Poster ‘Risk assessment of bees from the use of biocides – exposure assessment’)
- Higher tier effects assessment (applicability of field studies for biocides, as studies designed for PPPs)
- Screening step for metabolites (PPPs: data from residue/metabolism studies, biocides: source of exposure

Commonalities

- Bee exposure scenarios
- Effects assessment, information requirements for lower tier risk assessment
- Principles of lower tier risk assessment (dietary: acute, chronic & larvae; contact: acute)
- Specific protection goal for honey bees (max. 10 % colony reduction)
- Time-reinforced toxicity (TRT)
- Sublethal effects (SLE)
- Principles of mixture and metabolite assessment

Non-bee pollinators (NBPs)

- ECHA report on NBPs3 for biocides explains the main characteristics, typical habitat types, possible exposure pathways, and evaluates the sensitivity of Diptera, Lepidoptera, non-bee Hymenoptera, and Coleoptera to insecticides.
- Concluding on species sensitivity was not possible due to scarce available data
- Data generation for contact and oral endpoints is crucial, and standard test guidelines need to be created.

Figure 1. Simplified risk assessment scheme. Yellow boxes highlight differences in the scheme between biocides and PPPs.

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EFSA's scientific project focuses on non-target arthropods and aims to:
- Establish a quantitative link between direct effects of PPPs and their ecological consequences
- Investigate interspecies sensitivity of key driver species due to direct effects
- Characterise the exposure for the key driver species

Conclusions

- The guidelines for biocides and PPPs provide applicants and evaluating competent authorities with a methodology to assess the risk to honey bees, bumble bees and solitary bees, in line with the agreed specific protection goal.
- The methodology will provide for a more consistent and robust assessment of risks to bees, which ultimately will contribute to a better protection of arthropod pollinators.
- Guidelines for the risk assessment of pollinators other than bees will be developed after new standard test guidelines have been developed and information on key driver species' ecology is available.

References

1ECHA. 2024. Guidance on the assessment of risks to bees from the use of biocides.