References

ALIX, A., M. MILES, G. WEYMAN, 2013: Sensitivity and impact analysis of the Risk assessment for honey bees, bumble bees and solitary bees based on the guidance of the European Food Safety Authority. - ECPA, unpublished report.

EFSA 2013: EFSA Guidance Document on the risk assessment of plant production products on bees (*Apis mellifera*, *Bombus* spp. and solitary bees) (published on July 04, 2013, updated on 04 July 2014). - EFSA Journal **11** (7): 3295, 268 pp.

EPPO (2010a): EPPO Standards PP3/10(3), Environmental risk assessment for plant protection products. Chapter 10: honeybees. - Bulletin OEPP/EPPO Bulletin **40**: 323–331.

EPPO (2010b): EPPO Standards PP1/170(4), Efficay evaluation of plant protection products. Side effects on honeybees. - BULLETIN OEPP/EPPO BULLETIN **40**: 313–319.

LUECKMANN, J., M. MILES, R. BECKER, A. ALIX, A. DINTER, ST. KODER, E. PILLING, N. RUDDLE, C. SCHNEIDER, A. SHARPLES, L. OGER, 2019: Chronic oral exposure of adult honey bees to PPPs: sensitivity and impact analysis of EFSA Bee GD. Poster presentation, ICP-PR Bee Protection Group, 14th Symposium on the Hazards of Pesticides to Bees, Bern, Switzerland, 23 -25 October, 2019.

OECD 2013: OECD Guidelines for the testing of chemicals No. 237: Honey Bee (*Apis mellifera*) larval toxicity test, single exposure, OECD, Paris: 10 pp.

OECD 2016: Guidance Document on honey bee larval toxicity test following repeated exposure; Series on Testing & Assessment No. 2349. ENV/JM/MONO(2016)34, OECD, Paris: 41 pp.

PAMMINGER, T., R. BECKER, S. HIMMELREICH, C. W. SCHNEIDER, M. BERGTOLD 2018: The nectar report: quantitative review of nectar sugar concentrations offered by bee visited flowers in agricultural and non-agricultural landscapes. - PeerJ 7: e6329, 15 pp.

RORTAIS, A., G. ARNOLD, M.-P. HALM, F. TOUFFET-BRIENS 2005: Modes of honeybees exposure to systemic insecticides: estimated amounts of contaminated pollen and nectar consumed by different categories of bees. - Apidologie **36**: 71–83.

1.3.P Chronic oral exposure of adult honey bees to PPPs: sensitivity and impact analysis of EFSA Bee GD

Johannes Lückmann[1], Mark Miles[2], Roland Becker[3], Anne Alix[4], Axel Dinter[5], Stefan Kroder[6], Ed Pilling[4], Natalie Ruddle[7], Christof Schneider[3], Amanda Sharples[5], Laurent Oger[8]

[1]RIFCON GmbH, johannes.lueckmann@rifcon.de, [2]Bayer AG, mark.miles@bayer.com

[3]BASF SE, [4]Corteva Agriscience, [5]FMC Agricultural Solutions, [6]ADAMA, [7]Syngenta Ltd, [8]ECPA

DOI 10.5073/jka.2020.465.041

Abstract

Based on EU Regulation 1107/2009/EC the current regulatory risk assessment on bees has to address the chronic risk on adult honeybees.

In July 2013 the European Food Safety Authority (EFSA) published a guidance document on the risk assessment of plant protection products on bees (EFSA 2013). This document is intended to provide guidance for notifiers and authorities in the context of the review of plant protection products (PPPs) and their active substances under Regulation (EC) 1107/2009 (EC 2009).

The first aim of this poster is to summarize industry data based on studies conducted up to 2018, for active substances and formulated products on the chronic oral testing of adult honeybees according to OECD test guideline 245 and its previously drafts, in order to gain an overview of these results and the selectivity of different product groups.

As a first step in the risk assessment, EFSA requires a screening step which consists of the calculation of risk quotients (ETRs) for the chronic exposure based on the application rate, an application depending shortcut value, an exposure factor and the endpoint (LDD_{50}). This considers exposure routes for the in-field (PPPs applied as sprays) and off-field (PPPs used as seed treatments and granules) scenarios. Where a use does not pass one of the screening level risk quotients, EFSA offers the possibility for refinement in a tier I risk assessment. This includes refinement of the exposure estimates from the screening step and also additional exposure routes, such as the exposure to flowering weeds in the field and adjacent flowering crops. Screening step and tier I risk assessment were also conducted for bumble bees and solitary bees, using 1/10th of the honeybee endpoint.

The second aim of this poster is to evaluate the impact of the proposed screening and tier I risk assessments on the pass rate of currently available active substances and formulated products, thereby testing the ability of the scheme to correctly identify compounds of potential concern and consequently screen out those of low concern. The third objective of this work is to present the outcome of alternative calculations as described by ECPA (2017).

The aforementioned analysis follows the principles described in the ECPA impact analysis (Alix et al. 2013) which used theoretical data due to lack of real data. The present analysis compares the pass rates from this first approach with the outcome based on real laboratory data which are now available.