Trusted science for safe food

Management Board
19 June 2019

Highlights from 93rd SC Plenary (April 2019)

Simon More

Chair of the EFSA Scientific Committee

efsa
European Food Safety Authority

Guidance adoption

GUIDANCE DOCUMENT

EFSA Journal

ADOPTED: date

doi:10.2903/j.efsa.20YY.NNNN

1 **Guidance on the use of the Threshold of Toxicological**
2 **Concern approach in food safety assessment**

3 EFSA Scientific Committee

4 Simon J. More, Vasileios Bampidis, Diane Benford, Jos Boesten, Claude Bragard, Thorhallur I
5 Halldorsson, Antonio F Hernández-Jerez, Susanne Hougaard Bennekou, Kostas P
6 Koutsoumanis, Hanspeter Naegeli, Søren S Nielsen, Josef R Schlatter, Dieter Schrenk,
7 Vittorio Silano, Dominique Turck, Maged Younes, Ursula Gundert-Remy, George E N Kass,
8 Juliane Kleiner, Anna Maria Rossi, Rositsa Serafimova, Linda Reilly and Heather M Wallace

Screening and prioritisation

A screening and prioritisation tool for the safety assessment of chemicals when:

- the chemical structure of the substance is known,
- there is limited chemical–specific toxicity data, and
- the human oral exposure is relatively low.

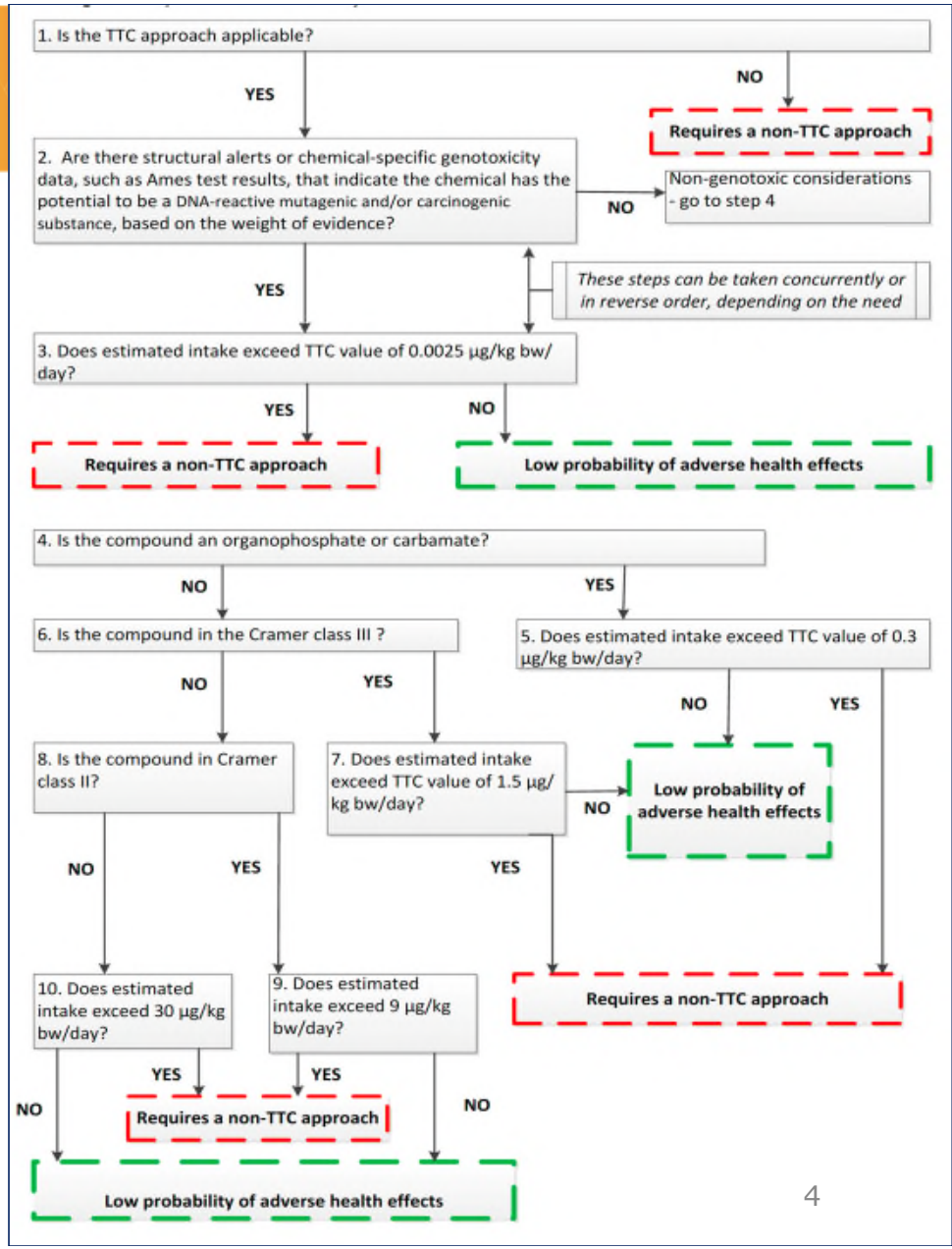
The TTC approach is not appropriate under some circumstances.

The approach is pragmatic, simple to implement and based on a decision tree approach.

A decision-tree

The Guidance provides a step-wise approach based on a decision tree where the probability of adverse health effect of substance of interest can be assessed based on:

- its chemical class, and
- the threshold of the corresponding exposure.



Relevant sectors

- Flavourings
- Pharmacologically active substances present in food of animal origin
- Impurities, metabolites and degradation products of food additives
- Development of criteria for recycled PET for use as FCM
- Evaluation of the toxicity of some metabolites and degradation products of plant protection products in the context of residue definition for risk assessment

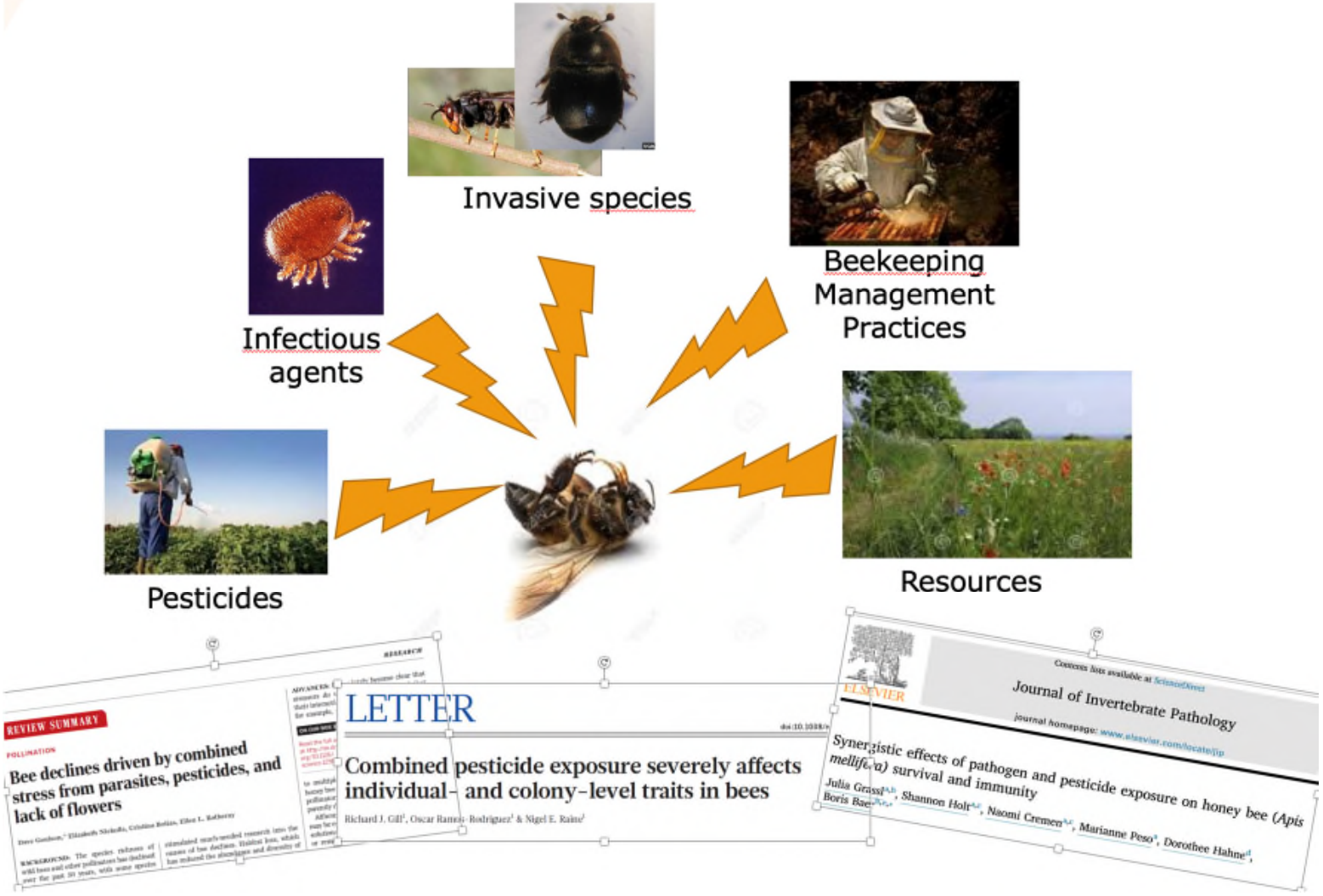
EP mandate on managed honey bees

The ENVI committee, therefore, considers it opportune for the Parliament to request that EFSA deliver a scientific opinion on the science behind the development of an integrated holistic approach for the risk assessment of multiple stressors in managed honey bees (*Apis mellifera*). The following issues have been identified for the development of a scientific opinion on the risk assessment of multiple stressors from both the in-hive environment and the surrounding landscape:

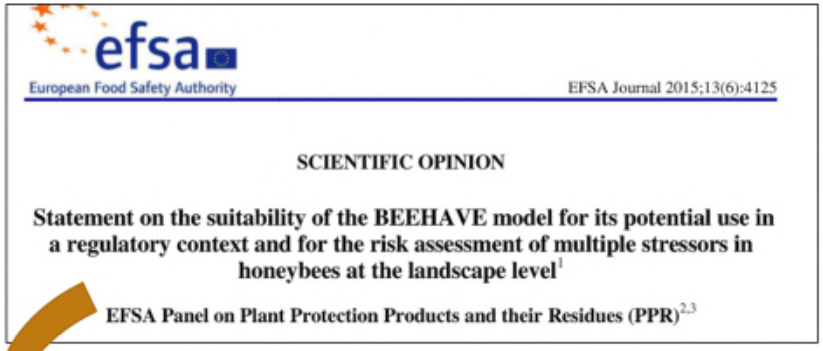
- The development of a methodology to take into account not only cumulative and synergistic effects of plant protection products but also includes issues related to bees' genetic variety, bee pathogens, bee management practices and the colony environment;
- The assessment of acute and chronic effects of multiple stressors on honey bees including colony survival and sub lethal effects;
- The work being developed by stakeholders to achieve harmonised data collection and sharing on bee health in EU and by doing so, support the EU Bee Partnership initiative by providing guidance for harmonised data collection and evidence-based risk assessments;
- The work conducted by EFSA under its project MUST-B that integrates the work being developed in EFSA's various panels.

With thanks to
Agnès Rortais

A multifactorial problem



ApisRAM: the model

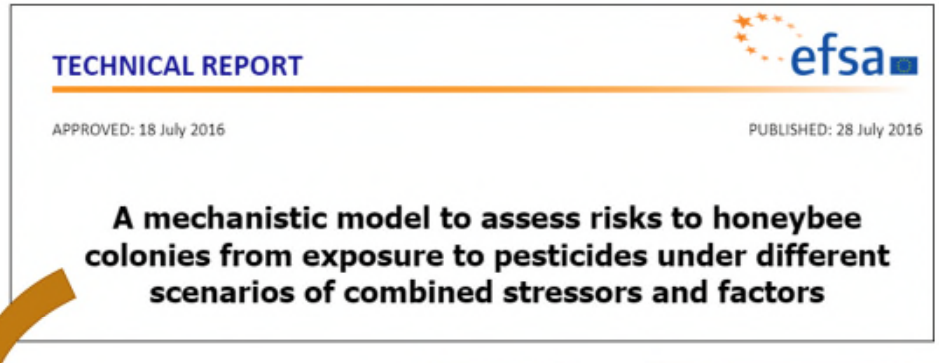


European Food Safety Authority EFSA Journal 2015;13(6):4125

SCIENTIFIC OPINION

Statement on the suitability of the BEEHAVE model for its potential use in a regulatory context and for the risk assessment of multiple stressors in honeybees at the landscape level[1]

EFSA Panel on Plant Protection Products and their Residues (PPR)[2,3]



TECHNICAL REPORT

APPROVED: 18 July 2016

PUBLISHED: 28 July 2016

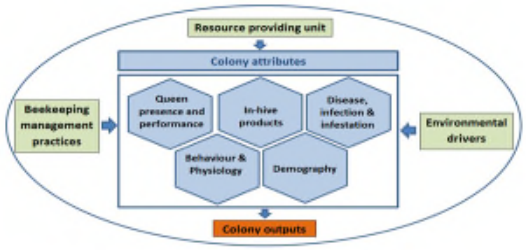
A mechanistic model to assess risks to honeybee colonies from exposure to pesticides under different scenarios of combined stressors and factors

MUSTB WG

2016: Call for interest
2017: Start of the model development

Field data collection for ApisRAM

Toolbox



EXTERNAL SCIENTIFIC REPORT

anses

APPROVED: 29 March 2016 PUBLISHED: 6 April 2016

Statistical analysis on the EPILOBEE dataset: explanatory variables related to honeybee colony mortality in EU during a 2 year survey

French Agency for Food, Environmental and Occupational Health & Safety (ANSES)

MUST-B WG

TECHNICAL REPORT

efsa European Food Safety Authority

APPROVED: 17 May 2017

doi:10.2903/sp.efsa.2017.EN-1234

Specifications for field data collection contributing to honey bee model corroboration and verification

European Food Safety Authority

2017: Call for interest
2018: start of the DC

Consider multiple chemicals

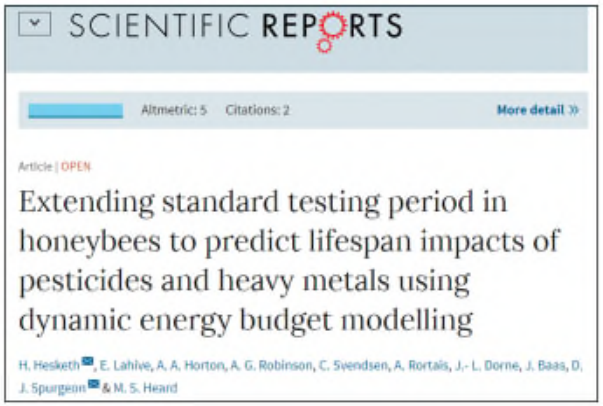
EXTERNAL SCIENTIFIC REPORT

Centre for Ecology & Hydrology

APPROVED: 29 February 2016

Chronic oral lethal and sub-lethal toxicities of different binary mixtures of pesticides and contaminants in bees (*Apis mellifera, Osmia bicornis* and *Bombus terrestris*)

Centre for Ecology & Hydrology



SCIENTIFIC REPORTS

Altmetric: 5 Citations: 2 More detail

Article | OPEN

Extending standard testing period in honeybees to predict lifespan impacts of pesticides and heavy metals using dynamic energy budget modelling

H. Hesketh, E. Lahive, A. A. Horton, A. G. Robinson, C. Svendsen, A. Rortais, J.- L. Dorne, J. Baas, D. J. Spurgeon & M. S. Heard

PLOS ONE

RESEARCH ARTICLE

Comparing bee species responses to chemical mixtures: Common response patterns?

Alex Robinson, Helen Hesketh, Elma Lahive, Alice A. Horton, Claus Svendsen, Agnes Rortais, Jean Lou Dorne, Jan Baas, Matthew S. Heard, David J. Spurgeon

Contents lists available at ScienceDirect

Science of the Total Environment

journal homepage: www.elsevier.com/locate/scitotenv

ELSEVIER

Comparative toxicity of pesticides and environmental contaminants in bees: Are honey bees a useful proxy for wild bee species?

Matthew S. Heard, Jan Baas, Jean- Lou Dorne, Elma Lahive, Alexander G. Robinson, Agnes Rortais, David J. Spurgeon, Claus Svendsen, Helen Hesketh

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Engage European Commission

EVENT REPORT

APPROVED: 26 April 2016 PUBLISHED: 28 April 2016

EU scientific workshop on bee health and sustainable pollination

10 March 2016

European Food Safety Authority and the European Commission's Directorate General for Agriculture and Rural Development

Support from EC (H2020)

- **SFS-SFS-16-2017** on toxicological and omics data
  - POSHBEE
- **SFS-07-2018** on Bee Health Status Index and knowledge platform
  - BGOOD

Engage stakeholders

copa*cogeca

European Crop Protection

EVENT REPORT

APPROVED: 20 September 2017

doi:10.2903/sp.efsa.2017.EN-1299

Collecting and sharing data on bee health: towards a European Bee Partnership

European Food Safety Authority
and European Farmers and European Agri-Cooperatives,
European Professional Beekeepers Association, BeeLife the European Beekeeping Coordination and the European Crop Protection Association

2017/18

EU Bee Partnership Discussion group

efsa
European Food Safety Authority