Abstract

The honey bee (Apis mellifera) is typically used as a surrogate to evaluate the risk of pesticides to all bee species. However, there is uncertainty regarding the extent to which honey bees can serve as surrogates for solitary bees, bumble bees and stingless bees given differences in their life history traits (e.g., body size, feeding, sociality, flight/activity season, nesting materials, behavior, overwintering strategy, etc.). Lack of basic knowledge of non-Apis bee exposure scenarios has been among the biggest challenges in determining whether honey bees are sufficient surrogates for non-Apis bees. As a result of a tripartite effort between regulatory agencies, academia and agrochemical industry, an international workshop was organized in Washington D.C. on 10th-12th January 2017. Forty bee researchers and risk assessors from ten different countries gathered to discuss the current state of science on pesticides exposure to non-Apis bees, and to determine how well honey bee exposure estimates used by different regulatory agencies may be protective for non-Apis bee species. There was a general consensus that the current honey bee exposure assessment paradigm is highly conservative. However, several data gaps were identified that hindered a complete analysis of various routes of exposure between Apis and non-Apis bees, especially when non-Apis bees may be exposed via nesting materials such as soil (e.g., blue orchard bees; Osmia spp., alkali bees; Nomia spp.), leaves (e.g., alfalfa leafcutting bees, Megachile rotundata), or a combination of soil and leaves (e.g., stingless bees; tribe Meliponini). Basic conceptual models and preliminary exposure equations were discussed that could help to quantify these exposure routes, allowing for future comparisons with honey bee exposure estimates. The workshop proceedings, along with a list of critical research needs identified to quantify non-Apis bee exposure routes, will be published as a series of peer-reviewed journal articles.
Hazards of pesticides to bees
13th International Symposium of the ICP-PR Bee Protection Group
18. - 20. October 2017, València (Spain)

- Proceedings -
History ICPPR-Bee Protection Group conferences
1st Symposium, Wageningen, the Netherlands, 1980
2nd Symposium, Hohenheim, Germany, 1982
3rd Symposium, Harpenden, UK, 1985
4th Symposium, Řež, Czech Republic, 1990
5th Symposium, Wageningen, the Netherlands, 1993
6th Symposium, Braunschweig, Germany, 1996
7th Symposium, Avignon, France, 1999
8th Symposium, Bologna, Italy, 2002
9th Symposium, York, UK, 2005
10th Symposium, Bucharest, Romania, 2008
11th Symposium, Wageningen, the Netherlands, 2011
12th Symposium, Ghent, Belgium, 2014
13th Symposium Valencia, Spain, 2017
14th Symposium scheduled, Bern, 2019

Organising committee 13th conference
Dr. Jens Pistorius (Julius Kühn-Institut, Germany)
Dr. Anne Alix (Dow Agrosciences, United Kingdom)
Dr. Carmen Gimeno (Tiralcamp, Spain), local organiser
Dr. Gavin Lewis (JSC, United Kingdom)
Dr. Pieter Oomen (Wageningen, The Netherlands)
Dr. Veronique Poulsen (ANSES, France)
Dr. Guy Smagghe (Ghent University, Belgium)
Dr. Thomas Steeger (US Environmental Protection Agency, USA)
Dr. Klaus Wallner (Hohenheim University, Germany)

Editors
Dr. Pieter A. Oomen, Wageningen, The Netherlands
Dr. Jens Pistorius, Braunschweig

Group photo of all symposium participants, standing in front, from left:
Thomas Steeger (new board member),
Jens Pistorius (new chairman),
Françoise & Pieter Oomen with award (editor & former chairman),
Guy Smagghe (organiser, symposium host and new board member),
Job & Margreet van Praagh with award,
Anne Alix (secretary of the board)

Foto
Pieter A. Oomen (Bumble bee Bombus lapidarius on thistle)

The proceedings of the symposia (such as these) are being published by the Julius Kühn Archive in Germany since the 2008 symposium in Bucharest, Romania. These proceedings are also accessible on internet, e.g. the former symposium proceedings published by JKI can be found on https://ojs.openagrar.de/index.php/JKA/issue/archive (Issues 423, 437, 450). Furthermore, proceedings of former meetings have meanwhile been digitalized and can be found on https://www.openagrar.de/receive/openagrar_mods_00032635.

Bibliografische Information der Deutschen Nationalbibliothek

ISSN 1868-9892
ISBN 978-3-95547-064-7
DOI 10.5073/jka.2018.462.000

Alle Beiträge im Julius-Kühn-Archiv sind unter einer Creative Commons - Namensnennung - Weitergabe unter gleichen Bedingungen - 4.0 Lizenz veröffentlicht.

Printed in Germany by Arno Brynda GmbH, Berlin.