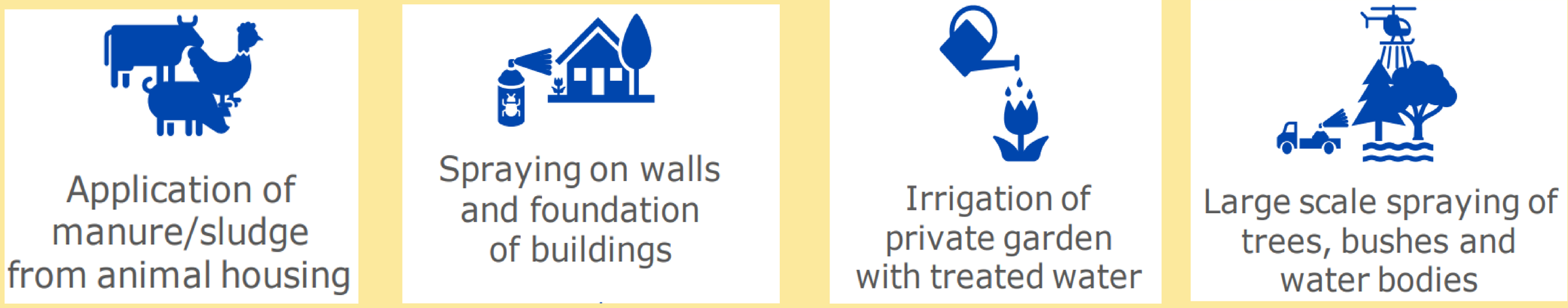
DEVELOPMENTS IN THE BIOCIDES RISK ASSESSMENT FOR BEES

Helena Crosland[1]
[1]Cambridge Environmental Assessments, Boxworth, UK. Helena.Crosland@cea-res.co.uk

Until recently there has been **no quantitative risk assessment** of bees when exposed to biocides. In 2019 the European Chemicals Agency (ECHA) was mandated by the European Commission (EC) to **develop guidance for assessing the risks to arthropod pollinators** (including bees), and to specify the information required to enable a conclusion to be drawn by any evaluating authority. The result of this was **new guidance** on how to assess biocide risks to bees (ECHA, 2024[1]). The guidance is very closely linked to the currently un-noted pesticide guidance EFSA (2023[2]), though with some notable differences, primarily relating to the **estimation of exposure from biocidal uses**. The new biocide guidance will apply to active substance approvals and biocidal product authorisations for which applications are submitted on or after **1 February 2026**.

Which Product Types (PTs) require an assessment for the risk to bees?

Current emission scenarios focus on **PT 18: insecticides**, **acaricides** and **products to control other arthropods** – for the following uses:



Graphic taken from ECHA webinar "Getting familiar with ECHA's guidance to assess risks of biocides to bees" (5 March 2024[3]) illustrating emission scenarios considered relevant to bee risk assessment.

Baits and applications to wasp/hornet nests are not currently assessed.

Other PT types are not automatically exempt and may be assessed in the future if concern for a chemical/use is raised.

What are the Specific Protection Goals (SPGs)?

The SPG for bees under the Biocidal Products Regulation (BPR) is: ***"Protection of pollination ecosystem service providers – bee colony/population strength".***

As for Plant Protection Products (PPPs), this has been translated into a threshold of 10% maximum reduction in colony/population size for honeybees.

The threshold for bumblebees and solitary bees remains undefined.

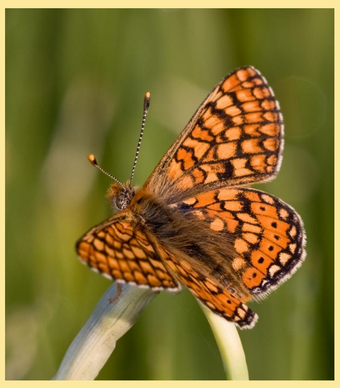
What are the data requirements?

If exposure of bees may occur then studies on honeybee acute oral/contact, chronic oral adult, and larvae (OECD 213, 214, 245, and 239) will need to be submitted for the active substance, and for products with ≥2 actives.

Acute studies are required for products with 1 active, and chronic adult/larval studies may be required if toxicity of the product is not within a factor of 3 of the active substance endpoints.

Metabolites must also be assessed where found in plant materials. A screening step of assuming 10x toxicity compared to the parent can be used.

Non-bee pollinators are not included, but there is the intention to include these in an update to the BPR risk assessment for non-target terrestrial arthropods in future.



What are the implications of the new guidance on biocidal product applications?

This is a big change for relevant biocides – moving from a virtually non-existent assessment to a formal, quantitative risk assessment.

Data requirements are comparable to PPP submissions, with the exception that there is no mandatory data/risk assessment requirement for bumblebees and solitary bees currently (due to a lack of SPGs). However, data on bumble bees and solitary bees may be requested by the evaluating authority, if considered relevant for the assessment.

The PNEC approach usually used for biocide ecotox risk assessment is not used for bees! Instead, the new biocide risk assessment for bees is very similar to the EFSA (2023) guidance for pesticides. However, the exposure/emission scenarios have had to be considered specifically for biocides.

The new guidance will apply to active substance approvals and biocidal product authorisations for which applications are submitted on or after 1 February 2026.

If you have any questions or this is likely to impact your submission, feel free to contact the author or CEA at enquiries@cea-res.co.uk for a discussion.

REFERENCES

1 ECHA Guidance on the assessment of risks to bees from the use of biocides. Version 1.0. February 2024.
2 EFSA (European Food Safety Authority), Adriaanse P, Arce A, Focks A, Ingels B, Jolli D, Lambin S, Rundlof M, Sußenbach D, Del Aguila M, Ercolano V, Ferilli F, Ippolito A, Szentes Cs, Neri FM, Padovani L, Rortais A, Wassenberg J and Auteri D, 2023. Revised guidance on the risk assessment of plant protection products on bees (Apis mellifera, Bombus spp. and solitary bees). EFSA Journal 2023;21(5):7989, 133 pp. https://doi.org/10.2903/j.efsa.2023.7989.
3 ECHA 2024. Getting familiar with ECHA's guidance to assess risks of biocides to bees. Online webinar hosted on 05/03/2024. Recording and materials available online: https://echa.europa.eu/-/getting-familiar-with-echa-s-biocide-guidance-for-the-risk-assessment-of-bees