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DRAFT WEB NEWS STORY

Pesticides and bees: EFSA finalises new guidance

EFSA has published guidance for assessing the potential risks to honey bees, bumble bees and solitary bees from the use of pesticides. The previous EU risk assessment scheme for honey bees did not take full account of risks from chronic or repeat exposure to pesticides or the potential risks to larvae. The new guidance fills these gaps as well as adding schemes for bumble bees and solitary bees. It also proposes a new method for assessing whether the potential harm posed to bees from the use of a plant protection product is acceptable. EFSA's Guidance Document will provide up-to-date advice to those involved in the evaluation of pesticides, including industry and public authorities.

The European Commission requested the new guidance in the context of its ongoing strategy for protecting bee health in Europe. There is widespread concern about the decline in bee numbers in some parts of the world. Many factors are believed to contribute to this decline, including viruses and pathogens, parasites, use of pesticides, climate change and other environmental factors including the possible effects of genetically modified organisms. The fall in numbers is causing concern because bees, particularly honey bees, play an important role in the pollination of a wide range of crops and wild plants.

EFSA's guidance proposes tiered risk assessment schemes that progress from a simple first tier to a more complex higher tier using semi-field¹ and field studies. All three schemes consider four main routes of exposure to pesticides from: spray deposits or dust particles; consumption of pollen; consumption of nectar; consumption of water (guttation fluid, surface water and puddles). A further element considered is exposure to metabolites of pesticides in pollen and nectar.

The schemes quantify the risk to bees using specific protection goals (SPGs), which were set in consultation with EU risk managers. SPGs define the maximum acceptable level of harm that can be caused to bees as measured against a series of "attributes to protect". For honey bees these are:

- survival and development of colonies;
- health of larvae;
- bee behaviour;
- abundance of bees;
- ability to reproduce.

¹ Semi-field tests are conducted outside the laboratory using enclosed environments such as cages or tunnels.

37 EFSA's pesticide experts agreed that, for honey bees, all the attributes to protect are directly related to
38 colony strength i.e. the number of individuals in a hive. The scheme for honey bees therefore suggests
39 that it is not acceptable for colony size to fall by more than 7% as a result of exposure to pesticides at
40 any time.

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42 Data on mortality rates of bumble bees and solitary bees are scarce, so the schemes for these species
43 are based on the data used for honey bees, but apply an additional safety factor to allow for differences
44 in sensitivity to pesticides and factors such as feeding and breeding behaviour.

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46 The EFSA guidance includes a new procedure for calculating if the potential level of harm is
47 acceptable. This method – which gives a more precise assessment of acceptable loss of foragers than
48 the existing approach – should afford greater protection to honey bee colonies situated on the edge of
49 fields treated with pesticides.

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51 EFSA's experts also developed a model for a risk assessment scheme which addresses the risk from
52 exposure to sub-lethal doses of pesticides. However, more work needs to be done as there are
53 differences between laboratory test findings and what actually happens in a bee colony. Therefore,
54 before this risk evaluation scheme can be completed it is necessary to design a method that accurately
55 quantifies the extent to which sub-lethal effects observed in a laboratory are relevant for real-life
56 effects on bee colonies.

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58 [Guidance on the Risk Assessment of Plant Protection Products on Bees \(*Apis mellifera*,
59 *Bombus* spp. and solitary bees\)](#)

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61 [Communication from the European Commission on honeybee health](#)

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