

## NEW LETTER

# Maximize EU's pollinator protection

Bees and other pollinators play vital roles in biodiversity and food security, and they are a source of income and inspiration. Yet, bees' biodiversity and abundance are decreasing every day. Their decline, driven by pesticides (1–4), poses serious threats to the environment, ecosystems, and human health. The European pesticide authorization framework states that a pesticide can only be put on the market if it has no harmful effects on human health or animal health and no unacceptable effects on the environment (5). EU ministries decide what constitutes an “acceptable” effect of a pesticide on bees. We call on EU governments to apply the maximum level of protection of pollinators from pesticides(6).

In 2013, the European Food Safety Authority, at the request of EU Member State governments, set a maximum acceptable level of 7% reduction on colony size (i.e., number of bees per colony) (7). Many beekeepers, environmentalists, and scientists feel that 7% is already too high(6, 8), even for the model species of honey bees. Meanwhile, wild pollinator species, many of which are far more sensitive than honey bees to pesticides (9), continue to rapidly decline (10–12).

Scientific evidence about the impact of pesticides on pollinators is vast, clear, and increasingly well documented. The EU ministries must act responsibly by basing their regulatory requirements on scientific evidence, which indicates that 7% negative impact on honey bee colony size is the maximum level that would be acceptable. These decisions can protect future generations from a future without pollinators.

*Noa Simon-Delso<sup>1\*</sup>, Alexandre Aebi<sup>2</sup>, Gerard Arnold<sup>3</sup>, Jean Marc Bonmatin<sup>4</sup>, Fani Hatjina<sup>5</sup>, Piotr Medrzycki<sup>6</sup>, Fabio Sgolastra<sup>7</sup>*

<sup>1</sup>BeeLife European Beekeeping Coordination, Louvain la Neuve, Belgium. <sup>2</sup>Laboratoire de Biodiversité du Sol, Instituts de Biologie et d'Ethnologie, Université de Neuchâtel, Neuchâtel, Switzerland. <sup>3</sup>Laboratoire Evolution, Génomes, Comportement, Ecologie, Centre National de la Recherche Scientifique (CNRS), Gif-sur-Yvette, France. <sup>4</sup>Centre de Biophysique Moléculaire, CNRS, 45071 Orléans, France. <sup>5</sup>Institute of Animal Science, Department of Apiculture, ELGO DIMITRA, Thessaloniki, Greece. <sup>6</sup>Council for Agricultural Research and Economics, Agriculture and Environment Research Centre, Bologna, Italy. <sup>7</sup>Dipartimento di Scienze e Tecnologie Agro-Alimentari, Alma Mater Studiorum Università di Bologna, Bologna, Italy.

\*Corresponding author. Email: simon@bee-life.eu

## REFERENCES AND NOTES

1. E. M. Peterson, F. B. Green, P. N. Smith, *Ecotoxicology and Environmental Safety*. **208**, 111681 (2021).
2. H. Jactel et al., *Comptes Rendus. Biologies*. **343**, 267–293 (2021).
3. J. M. Iwasaki, K. Hogendoorn, *Agriculture, Ecosystems & Environment*. **314**, 107423 (2021).
4. L. Drivdal, J. P. van der Sluijs, *Current Opinion in Insect Science*. **46**, 95–105 (2021).
5. E. European Parliament, Council of the European Union, *Official Journal of the European Union*. **L309**, 1–50 (2009).
6. Serious scientific concerns about bees' protection level and the current pesticide risk assessment regime (2021), (available at [https://drive.google.com/file/d/1\\_EcQBkQigjq65KTowY9uZIUmKMkiAqFN/view?usp=sharing](https://drive.google.com/file/d/1_EcQBkQigjq65KTowY9uZIUmKMkiAqFN/view?usp=sharing)).
7. EFSA, *EFSA J.* **10**, 2668 (2012).

8. Beekeeping organisations and civil society concerns on pesticide risk assessment methodology and bees' protection from pesticides. BeeLife (2021), (available at <https://www.bee-life.eu/post/civil-society-urges-the-european-council-to-secure-highest-protection-of-bees-and-pollinators>).
9. M. Arena, F. Sgolastra, *Ecotoxicology* **23**, 324–334 (2014).
10. E. E. Zattara, M. A. Aizen, *One Earth* **4**, 114–123 (2021).
11. C. A. Hallmann et al., *PLOS ONE* **12** (10):e0185809 (2017).
12. A. Nieto et al., “European red list of bees” (Luxembourg: Publication Office of the European Union., 2014).