European Research Alliance

ERA Pesticide Free

Towards a chemical pesticide free agriculture

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FINLAND

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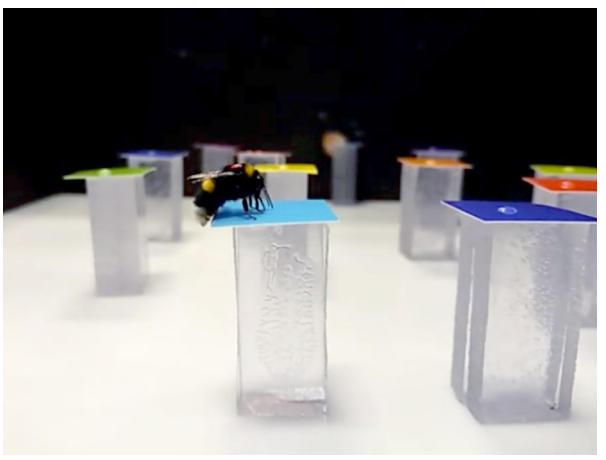
Every two weeks, this newsletter will be prepared by a different Alliance member.

*Today we are happy to share a contribution from the Natural Resources Institute **Finland** (LUKE).*

Research emphasizes the need for monitoring pesticide residues in agricultural environments and considering their sublethal effects on wild pollinators in pesticide risk assessment

Minimizing the risks of pesticides on insect pollinators is crucial for food security and biodiversity. Recent research conducted in Finland assessed pesticide residue levels in honeybee collected pollen and their effects on bumblebee cognitive abilities. The results showed that the residue levels encountered in pollen and nectar can impair bumblebee colour discrimination abilities.

This emphasizes the need for more systematic monitoring of pesticide residues within agricultural environments and assessing sublethal effects of pesticide residues not only on honeybees but also on wild pollinators. The research contributes to minimizing risks to pollinators and developing pesticide risk assessment protocols.



©: Lotta Kaila

References:

1) Kaila et al. (2022) Pesticide residues in honey-bee collected pollen: does the EU regulation protect honeybees from pesticides?;

2) Kaila et al. (2023) Oral exposure to thiacloprid-based pesticide (Calypso SC480) causes physical poisoning symptoms and impairs the cognitive abilities of bumblebees;

3) Kaila et al. (2023) Chronic oral exposure to Amistar fungicide does not significantly affect colour discrimination but may impact memory retention in bumblebees;

4) Kaila L (2023) Pesticide residues in the environment and their effects on bees.

3rd workshop on Pesticide Fate and Effects on Environment in Northern Zone 10-12 September 2024 in Jokioinen, Finland

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The **3rd workshop on Pesticide Fate and Effects on Environment in Northern Zone** aims to bring together researchers, authorities, advisors, industries and others interested to share knowledge on pesticide fate and effects on environment with a focus on the northern zone.

The 1st workshop took place in Norway (2014) and the 2nd in Sweden (2016). The 3rd will now be organized in Finland by Natural Resources Institute Finland (Luke) to present the newest research results concerning the use, monitoring, and modelling of pesticide fate, as well as their adsorption into soil/fauna and degradation in the northern climate.

Abstracts (200 words) for oral and poster presentations on the following topics are invited: 1) Pesticide use and residues in soil and water and organisms, 2) Modelling of pesticide fate, 3) Harmful effects of pesticide residues on the environment/organisms, and 4) Developing, using and comparison of different pesticide risk-indicators. The public web page of the workshop will open soon.

Further information: organizer contacts Marleena Hagner (marleena.hagner@luke.fi) and Kati Räsänen (kati.rasanen@luke.fi).

Finnish farmers piloting pesticide-free practices in the project "IPM-productivity and responsibility in food production"

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The aim of the project is to study preventative and direct IPM methods that reduce chemical pesticide use in Finnish agriculture and to promote a change towards comprehensive plant health care. The project is based on two pilot platforms consisting of contract farmers from companies Fazer Mill and Atria with 20 conventional and organic farms in total.

The project provides information on the biological and economic effectiveness of IPM methods. In addition, it promotes system-level design and implementation in plant health, raises awareness of IPM principles among farmers, advisers, food businesses and research, and strengthens knowledge transfer and learning between farmers.

This is the newsletter of the European Research Alliance *Towards a chemical pesticide free agriculture*
Visit the Alliance's website: https://www.era-pesticidefree.eu/

This issue has ben prepared by LUKE as a member of this Alliance.
If you would like more information about this issue, feel free to contact them.