European Research Alliance

ERA Pesticide Free

Towards a chemical pesticide free agriculture

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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 Julius Kühn-Institut (JKI) **in Germany**.*

New project FORTUNA started on 1st of January 2024

The JKI-coordinated project **FORTUNA** "Future innovation for pesticide use reduction in agriculture" aims to address future challenges in the light of the F2F Strategy targets to reduce the overall risk and use of chemical pesticides, and the use of hazardous ones by 50% by 2030. On the long term the project will contribute to pave the way towards zero chemical pesticide use in agriculture. It is a Horizon Europe Coordination and Support Action with 11 partners from 10 countries. FORTUNA will identify and analyse exisiting promising IPM solutions from a multisdisciplinary perspective that helps to substantially reduce the use and risk of chemical pesticides and ultimately lead to novel pesticide-free farming practices. Additionally, the project will identify barriers and gaps in research that may hinder to reach these goals. Therefore, FORTUNA will develop a Strategic Research and Innovation Agenda that prioritises research needs and shapes the design of future research programs. This will ensure that farmers can exploit innovations necessary to achieve the F2F targets and pave the way for a further reduction of pesticide use or even pesticide-free agriculture.

First German interdisciplinary conference "Transformation of Plant Production"

In November 2023, the Julius Kühn Institute (JKI) organised a two-day interdisciplinary conference entitled "Transformation of Plant Production". The conference was a collaborative effort with the German societies for plant nutrition, phytomedicine, crop production, and plant breeding and was supported by the German Federal Ministry of Food and Agriculture (BMEL). The 170 participants and international experts discussed the challenges of sustainable plant production in the future. They addressed questions of breeding, plant nutrition, plant protection and plant production to be addressed to create resource-efficient and economically viable crop production systems, which are adapted to climate change and avoid negative effects on biodiversity. Furthermore, the dynamic adaptation of production systems to societal demands and changes in consumer behavior were discussed. The experts agreed that a long-term interdisciplinary and systemic approach is necessary to answer these challenges, and that research along the entire production chain is the key to sustainable plant production.

Conference "Transformation of Plant Production", Berlin, 23-24 November 2023 (©M.Karabensch, JKI)

Study: Long-term data in agricultural landscapes indicate that insect decline promotes pests well adapted to environmental changes

Sationary suction trap for long term monitoring at JKI in Quedlinburg/Harz (© T.Will, JKI)

A long-term study conducted by the Julius Kühn Institute (JKI) has revealed a significant decline in flying insect biomass of approximately 95% over 24 years in the Northern Harz region, an area with intensive crop production. The study suggests that agricultural landscapes with few semi-natural habitats promote the occurrence of pests, which are further enhanced by mild temperatures and longer development periods.

References: (Ziesche et al., 2023) DOI: https://doi.org/10.1007/s10340-023-01698-2

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 JKI as a member of this Alliance.
If you would like more information about this issue, feel free to contact them.