



European Research Alliance

ERA Pesticide Free

Towards a chemical pesticide free agriculture

NEWSLETTER #15 GERMANY

17 April 2024

Every two weeks, this newsletter will be prepared by a different Alliance member.
Today we are happy to share a contribution from the [University of Würzburg](#) in Germany.

Research highlights pesticide-free management options for winter oilseed rape

Pesticide resistance and global warming increase pest pressure in European winter oilseed rape systems and hinder the transition towards pesticide-free agriculture. Two recent publications by the University of Würzburg show that sown flower areas have the potential to increase natural pest control in adjacent oilseed rape fields, especially if flower areas are large, perennial, and unmanaged. Application of pesticide abrogates this positive effect. At the same time, regional coordination of oilseed rape crop rotations can prevent high pollen beetle abundances, while selection of early-flowering oilseed rape varieties reduces the risks of increased pest pressure with warming climate.

Read the publications:

Fricke et al. (2022) Earlier flowering of winter oilseed rape compensates for higher pest pressure in warmer climates. *Journal of Applied Ecology*, <https://doi.org/10.1111/1365-2664.14335>

Krimmer et al. (2022) Flower fields and pesticide use interactively shape pollen beetle infestation and parasitism in oilseed rape fields. *Journal of Applied Ecology*, <https://doi.org/10.1111/1365-2664.14051>



Oilseed rape beetle infestation
Picture: Ute Fricke

COST-Action TOP-AGRI-Network: two online concept-knowledge workshops in Germany highlight the requirements for the transition towards pesticide-free agriculture



Flowers in vineyard
Picture: Matthias Böckel (Pixaby)

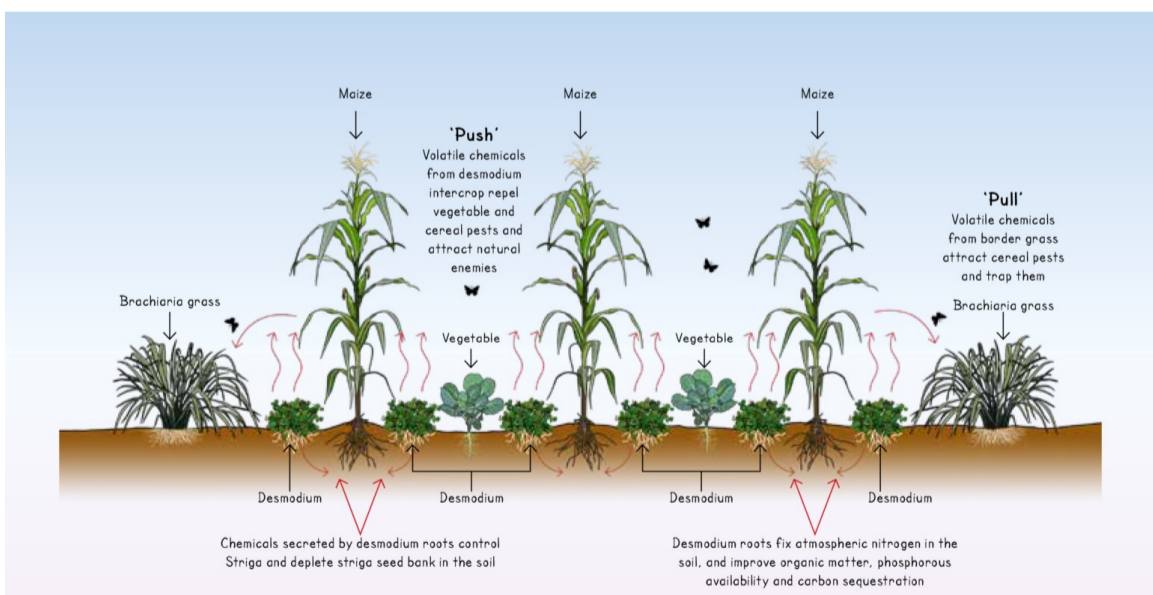
The COST Action [TOP-AGRI-Network](#) targets the transition towards zero-pesticide agriculture. Two stakeholders workshops conducted in Germany in May 2023 identified obstacles and opportunities for pesticide-free small grain and viticulture systems. Developing innovative technologies, establishing unbureaucratic, evidence-based political frameworks and conducting transdisciplinary research on sustainable agricultural practices were identified as key drivers for the success of pesticide-free agriculture.



UPSCALE project fosters the design, adaptation and adoption of push-pull strategies for integrated agro-ecological management

The ongoing EU-project [UPSCALE](#) (Horizon 2020) aims to realize the transformative potential of [push-pull technology](#). This innovative alternative approach to pest management fosters food security and climate change mitigation while reducing the environmental impact of agricultural practices such as pesticide application. The push-pull strategy implemented in the sub-Saharan region of East Africa in maize cropping systems helps to control stemborers and striga weed. It also improves soil fertility and significantly increases yield quantity and stability.

For more information and updates, please visit the website <https://upscale-h2020.eu/>



Picture: Project UPSCALE

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 been prepared by the [University of Würzburg](#) - [Department of Animal Ecology and Tropical Biology](#) as a member of this Alliance.

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