

Strategy to enhance biodiversity in orchards

Problem

Pest control in organic fruit orchards should not rely on external inputs with adverse effects but on other strategies and methods that support biodiversity and natural cycles adapted to local conditions.

Solution

Measures contributing to the enhancement of beneficial insects, pollinators and general biodiversity in the orchard can be integrated in the orchard or at the borders.

Benefits

Appropriately designed measures that aim to enhance predators of important pests or pollinators often also enhance species biodiversity in general. Moreover, many organic fruit growers are highly motivated to contribute to their orchard management to enhance biodiversity in agroecosystems.

Applicability box

Theme

Temperate fruits, Pest control, Biodiversity and nature conservation

Keywords

Temperate fruits, Pest control, Biodiversity and nature conservation, Nature conservation

Context

Europe

Application time

All year long

Equipment

For strips in the alley, a special mulching machine to spare the strip while mulching the rest of the alley is required

Practical recommendation

The following measures can be applied:

- Establish hedges at the border of the orchard¹
- Plant anchor plants at the end of the rows²
- Set up small flower strips with a high number of plant species containing also open nectar plants to attract beneficial insects in the middle of the alley
- Practice alternate mulching
- Integrate high-perennial fringes along edge structures with a high diversity of plant species and open nectar plants. If feasible, mulch almost part of these fringes in spring to offer overwintering sites for insects
- Install nest boxes for birds and bats in your orchard
- Set up nest boxes for wild bees in the orchard
- Include structures such as stone or wood piles in the orchard to offer shelter for weasels and other species.

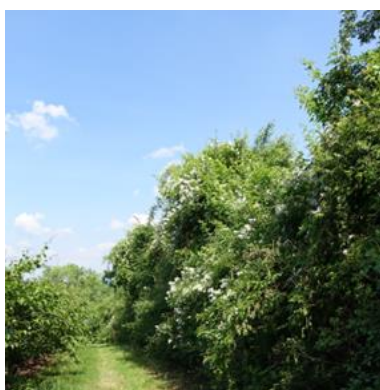
All measures to enhance biodiversity must be integrated into an intelligent vole management plan adapted especially to vegetation management.



Picture 1: High fringe at the border. Photo: Jutta Kienzle, Naturland.



Picture 2: High fringe at the border. Photo: Jutta Kienzle, Naturland.



Picture 3: Hedge at the border of the orchard. Photo: Jutta Kienzle, Naturland.



Picture 4: Nest box for wild bees. Photo: Jutta Kienzle, Naturland.

Further information

Weblinks

- Check the [Organic Farm Knowledge platform](#) for more practical recommendations.
- <https://biodivobst.uni-hohenheim.de/>
- 1. Adolphi, C., Oeser, N. 2022. [Practice Abstract Hedges as a valuable component of biodiversity enhancement in organic orchards](#). FÖKO. BIOFRUITNET.
- 2. Adolphi, C., Oeser, N. 2022. [Enhancing biodiversity with "Anchor plants" in organic orchards](#). FÖKO. BIOFRUITNET.

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