

Introducing predatory mites into fruit orchards

Problem

Sucking pests, such as red spider mites, pear leaf blister mites and plum rust mites, are often affecting fruit trees and cause extensive damage to the fruits.

Solution

Using the predatory mite *Typhlodromus pyri* can be a successful biological control solution for these sucking pests.

Benefits

After the introduction of predatory mites, trees are healthier and more vigorous. They flower regularly and produce fruits with better flavour.

Practical recommendations

- Introduce predatory mites to trees, specifically the predatory mite *Typhlodromus pyri* (Picture 1), to all types of fruit trees (pith and stone fruit trees).
- Introduce *Typhlodromus pyri* using felt strips in which this predatory mite overwinters (Picture 2).



Picture 1: Predatory mite *Typhlodromus pyri*. Photo: Martina Novotná, Biocont Laboratory.



Picture 2: Felt strips with overwintered *Typhlodromus pyri*. Photo: Radek Vávra, VSUO.



Picture 3: Tree branches in early spring. Photo: Radek Vávra, VSUO.

Applicability box

Theme

Crop production, Fruit growing

Keywords

Pest control, Suckering mites, Fruit quality, Flavour

Context

Fruit production areas, temperate regions, young plantations

Application time

Early spring

- Place felt strips on tree branches in winter, preferably in early spring when it is still cold, and *Typhlodromus pyri* is not yet active (Picture 3) and secure with an office stapler.
- Store the felt strips at a low temperature before use, for example, in a refrigerator, to avoid waking the mites up prematurely from hibernation.
- Apply one strip per tree. If the branches of the trees overlap, the mite will climb over to reach the other tree.
- A minimum number of ten individuals of the predatory mite per felt strip.
- The population of *Typhlodromus pyri* increases rapidly in the spring when temperatures increase. The mites begin to multiply and feed on pest eggs and larvae
- Expect better results in the second year after release, when the predatory mite has multiplied sufficiently.

- Introduction of *Typhlodromus pyri* is recommended into orchards with plastic covers where micro-conditions are favourable for the reproduction of sucking pests, and their occurrence is there often higher.
- Apply *Typhlodromus pyri* only once; they remain on the trees for decades and suppress pests for the lifetime of the trees.

Further information

Further reading

- Knapp, M., Van Houten, Y., Van Baal, E., Groot, T. Use of predatory mites in commercial biocontrol: current status and future prospects. *Acarologia*, *Acarologia*, 2018, 58 (Suppl), pp.72-82. DOI: 10.24349/acarologia/20184275

Videos

- [Applying predatory mites](#)
- [These Mites Rain Down To Save Your Strawberries | Deep Look](#)

Weblinks

- Check the [Organic Farm Knowledge platform](#) for more practical recommendations

About this practice abstract

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