BIOFRUITNET
Boosting Innovation in ORGANIC FRUIT production through stronger networks

föko
Fördergemeinschaft Ökologischer Obstbau e.V.

PRACTICE ABSTRACT

Regulation of sawflies in organic orchards

Problem

Sawflies, such as apple sawfly (*Hoplocampa testudinea)* and Pear sawfly *(H. brevis),* are major pests in organic fruit production which can cause massive yield losses. Regulation is possible by only a few measures.

Solution

Combining different preventive strategies and direct measures can help to control the pest.

Benefits

A combined strategy of different direct and indirect actions can lead to a long-term reduction of the apple saw-fly population in the orchards.

Practical recommendation

The need for regulation of the pest relates to the flower set strength. Regulation should be considered in years with weak flower sets or high infestation pressure.

Applicability box

Theme

Crop production, Horticulture, Temperate fruits

Keywords

Plant protection; Pest control; Biological pest control; Apple; Pear; Sawfly

Context

Central Europe

Application time

April, May

Required time

Immediately

Equipment

Quassia, NeemAzal, Sticky bands

Best in

Organic orchards

REGULATION OF THE APPLE SAW-FLY

Indirect measures

1. Monitoring

- Only for apple: Use predictive models (RIMpro, Fruitweb) to predict flight start (based on temperature development).
- Use white sticky traps (Picture 1) before blooming to monitor first appearance and flight time.
- Screen 100 flower clusters visually on egg-laying stitches on the Flower bottom (Pct.2). Depending on the abundance of flowers, the threshold is 1-4.

2. Mass-trapping

- Apply White sticky tapes temporarily in the Orchards before flowering to catch the sawflies (150-250/ha). (see how in PA 24 (apple) and PA25 (pear) and the Video in the Links section).

Caution: Research is still ongoing with promising results so far. Check with regional advisory services or the Biofruitnet Network for new findings.

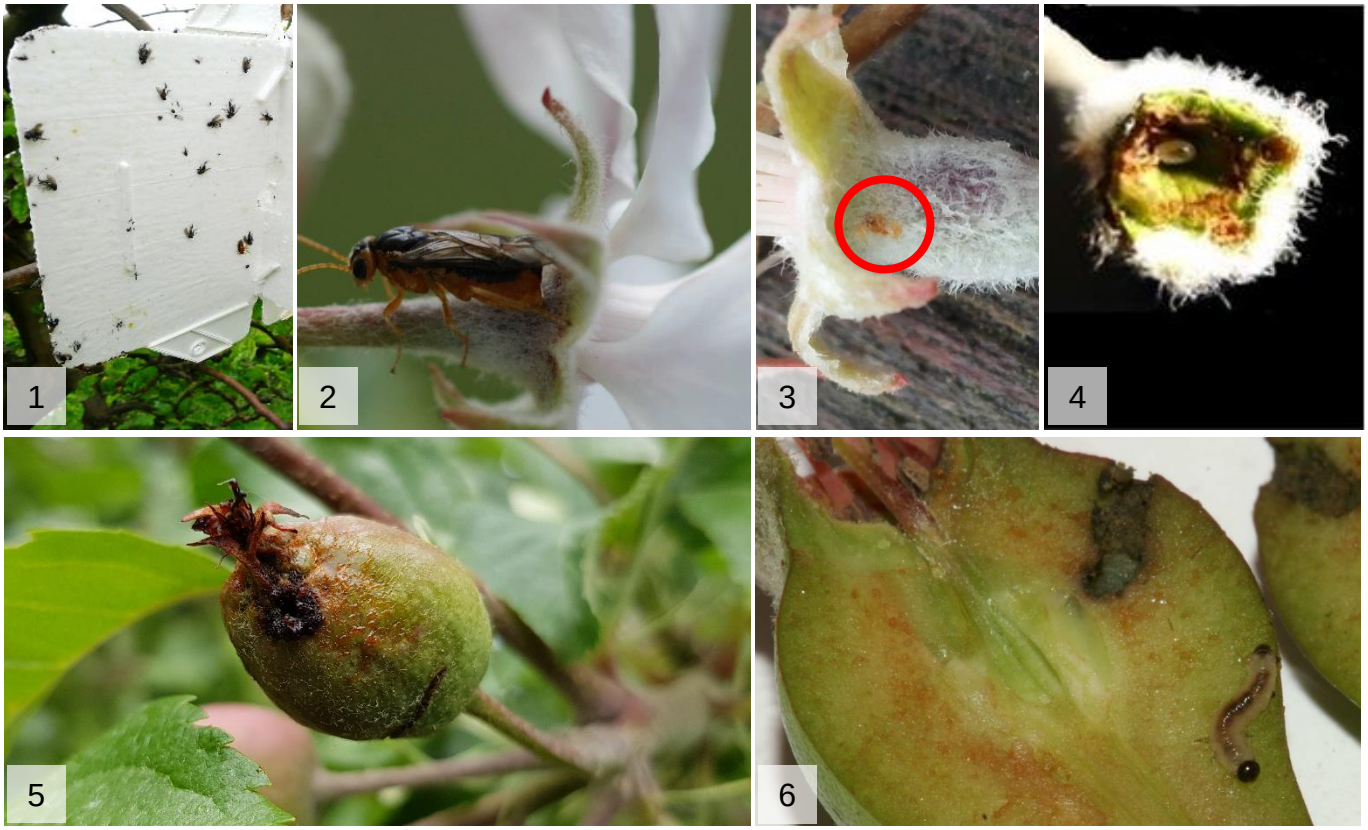
3. Other indirect measures

- Remove infested fruits manually in spring (reduces primary- and secondary infestation).

Direct measures

4. Use of Quassia or NeemAzal T/S

- Check the permission status of the products in your country.
- Apply between full bloom (BBCH 65) and petal fall (BBCH 67, see Links section).
    - *Quassia:* Use a high water application rate (1000 l/ha) and add a wetting agent.
    - *NeemAzal-T/S:* Effect is postponed; first apple gets damaged. Damage to the second and third fruit is diminished. **Caution on pears**, check the susceptibility of varieties on phytotoxicity!



Picture 1: White sticky trap for flight control; 2: Adult *H. testudinea* at egg laying; 3: Egg laying stitch in young fruitlet; 4: Egg of *H. testudinea* in the Flower bottom; 5: Fruit damage on Apple; 6: Sliced pear fruit with borehole and larvae (*H. brevis*). (Pictures: C. Adolphi, ÖON; G. Brouwer, Delphy)

Further reading

Videos

- Catch apple sawflies (*Hoplocampa testudinea*) with adhesive tape - Here's how!

Weblinks

- Gesunderhaltung der Kulturpflanzen im Ökologischen Apfelanbau (foeko.de) (DE)
- Untersuchungen zur Regulierung der Apfelsägewespe im Ökologischen Obstbau (DE)
- Erarbeitung von Bausteinen zur Optimierung der Regulierung der Apfelsägewespe, der Rotbeinigen Baumwanze und von Schalenwicklern und optimale Integration in die Gesamtstrategie zur Insektenregulierung im Ökologischen Kernobstanbau (orgprints.org) (DE)
- Brouwer, G. 2022. Practice abstract Apple sawfly (Hoplocampa testidunea): Catch that fly. Delphy. BIOFRUITNET.
- BBCH-scale for Pome Fruit

About this practice abstract

Publisher: Fördergemeinschaft Ökologischer Obstbau e.V. (FÖKO)
Traubenplatz 5, D-74189 Weinsberg
www.foeko.de

Authors: Christina Adolphi, Niklas Oeser

Contact: niklas.oeser@esteburg.de

Review: Ambra De Simone (IFOAM Organics Europe), Lauren Dietemann (FiBL)

Permalink: Organic-farmknowledge.org/tool/44937

Project name: BIOFRUITNET- Boosting Innovation in ORGANIC FRUIT production through stronger networks

Project website: https://biofruitnet.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 862850. This communication only reflects the author's view. The Research Executive Agency is not responsible for any use that may be made of the information provided. The authors and editors do not assume responsibility or liability for any possible factual inaccuracies or damage resulting from the application of the recommendations in this practice abstract.