

Earwigs' damage on stone fruits: how to control them

Problem

Forficula auricularia, the European earwig (EE) is a beneficial insect for pome, but a pest for stone fruits. EE can chew shallow or tunnel-like holes in stone fruits (Picture 1) and cause up to 40% damage to the fruit. Several earwigs species can be found in orchards.

Solution

Agronomical practices, such as using glue on trunks, mowing and mass trapping, are the most efficient methods to control EE.

Benefits

The methods described can be combined or used stand-alone to decrease the fruit damage caused by EE.

Practical recommendation

- EE are nocturnal, so day observation cannot estimate their density. Mobility of EE is very low, with 95% of the population remaining within a radius of 30 m.
- In organic, the most efficient method of control is the application of glue on the trunk to prevent them from reaching the fruits (Picture 2).
- Select a glue approved for organic. Use a brush to apply a 5 cm wide glue ring around the trunk. Apply it three weeks before harvest. Repeat the application if needed.
- The glue can cause superficial necrosis of the trunk on orchards of less than three years. Avoid using glue on young trees. Alternatively, use plastic film to protect the trunks, but remove them after use to avoid infections of the trunk.
- Plants with tall stems create bridges for EE between the ground and the tree. Mowing is necessary to prevent the EE from reaching the trees. Avoid leaving empty tubes or stems near the trees, as they are shelters for EE.
- Soil disturbance (tillage > 5 cm) and less ground cover may prevent the presence of EE in the tree row.
- Hens in an orchard eat EE, but their effectiveness in reducing fruit damages has not been quantified.

Applicability box

Theme

Crop production, Disease and pest control, Pest control

Keywords

Earwig, *Forficula*, Pest damages, Stone fruits, Control

Context

Stone fruits orchards

Application time

Depends on the method described

Required time

Depends on the method described

Period of impact

Stone fruits harvest

Equipment

Glue, brush

Best in

Soil management on the tree row must be tillage or mowed; avoid tall stem plants when using glue.



Picture 1. Earwigs' damage on an apricot fruit.
Photo: CE Parveaud (GRAB).



Picture 2. Sticky glue applied on the trunk before harvest. Photo: CE Parveaud (GRAB).

Further information

Video

- [How to trap earwigs](#). UCIPM (EN)

Further reading

- C. Hilaire, J. Ruesch, Y. Grall et M. Cellier. 2016. [La forficule: un insecte auxiliaire et ravageur](#). Infos CTIFL n°318, Jan-Fev 2016, pp. 48-52 (FR)
- [Understanding earwig phenology in top fruit orchards](#). B. Gobin, G. Peusens, R. Moerkens and H. Leirs. 2008. Ecofruit Conference (EN)

Weblinks

- [Apricot Pest Management Guidelines](#). UCIPM (EN)
- [How to manage earwig](#). UCIPM (EN)
- [Caractéristiques de *Forficula auricularia* et de ses dégâts](#). INRAE. (FR)
- Check the [Organic Farm Knowledge](#) platform for more practical recommendations

About this practice abstract

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